

Earth Science

Program Overview

Engineering, Math and Physical Science
Division, Room T102, (847) 543-2044
www.clcillinois.edu/programs/esc

TRANSFER DEGREE PROGRAM
AREA OF CONCENTRATION:
EARTH SCIENCE
(Associate in Science) Plan 11AB

I. College Requirements*

II. General Education Requirements 43

A. Communication Arts 9

CMM 121 Fundamentals of Speech 3

ENG 121 English Composition I 3

ENG 122 English Composition II **or**

ENG 126 Advanced Composition: Scientific
and Technical Composition 3

B. Social Sciences 9

Social Science Electives* 9

C. Physical and Life Sciences 8

ESC 120 Earth Science 4

BIO 120 Environmental Biology 4

D. Mathematics 8

Recommended Course:

MTH 145 Calculus and Analytic
Geometry I 5

Additional MTH 3

E. Humanities and Fine Arts 9

Fine Arts Elective* 3

Humanities Elective* 3

Humanities or Fine Arts Elective* 3

III. International/Multicultural Requirement (I/M)

Select one course from the International/
Multicultural (I/M) list*. This course can fulfill both
the I/M requirement and a Social Science,
Humanities, Fine Arts or Elective requirement. A B.A.
degree at many four-year colleges may require
college-level foreign language.

IV. Area of Concentration/Elective

Requirements 17

Recommended Courses#:

ESC 121 Physical Geology 4

ESC 122 Historical Geology 4

ESC 123 Introduction to Meteorology . . . 3

ESC 124 Oceanography 3

ESC 140 Introduction to Astronomy 4

ESC 224 Environmental Geology 3

ESC 226 Field Geology 3

Transfer Program Notes

* To complete an A.A., students must meet General
Requirements detailed in the current CLC catalog.
Visit www.clcillinois.edu/catalog (select Associate
Degree Transfer Program).

#Contact the EMPS division for additional elective
options from the Mathematics, Physics and
Chemistry areas.

Courses listed are recommended for students who
have not decided upon a specific four-year college
or university in which to transfer. For transfer
information, visit www.clcillinois.edu/info/transfer.

Students are strongly encouraged to meet with a
counselor or advisor to identify coursework that will
meet both CLC and transfer requirements.

How to Register

Visit www.clcillinois.edu/credit/register/
for steps on how to register.

About the Program

The newly established Earth
Science program combines
geology, oceanography,
meteorology and astronomy.

Course Information

Online Options

Three courses in the Earth
Science Program are also
offered online.

- **Earth Science**
(with lab credit)
ESC 120
- **Oceanography**
ESC 124
- **Environmental Geology**
ESC 224

New Course

Introduction to Meteorology
(ESC 123) will be offered for
students who want a
deeper understanding of the
atmospheric processes
behind weather phenomena
such as winter storms,
thunderstorms, tornadoes, and
hurricanes.

Transfer Information

All the courses currently
offered through CLC's Earth
Science Program are physical
science courses that are
transferable to four year
institutions.



Earth Science

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Earth science, also known as geoscience, is a term for the sciences related to the planet Earth.

CLC's Transfer Program

Get started at CLC and transfer to a four-year college or university. CLC's Earth Science program offers courses in geology, oceanography, meteorology and astronomy. These courses transfer to four-year institutions. Advancement in professional positions may require a master's degree or Ph.D.

Career Opportunities

The following occupations represent some career opportunities available to earth science majors (Some will require additional education):

- Air quality specialist/engineer
- Astronomer
- Atmospheric scientist
- Climatologist
- Ecologist
- Energy policy program manager
- Engineering geologist
- Environmental program manager
- Environmental quality specialist
- Environmental geologist
- Geochemist
- Geological engineer
- Geologist
- Geophysicist
- Hydrologist
- Industrial waste inspector
- Lobbyist
- Meteorologist
- Micropaleontologist
- Mine safety inspector
- Mining consultant
- Oceanographer
- Petroleum geologist
- Planetary geologist
- Programmer—(GIS) specialist
- Science/environmental regulatory policy expert
- Science and technical writer/editor
- Science museum educator
- Science museum exhibits coordinator
- Soil scientist
- State climatologist
- State geologist
- Teacher—geology, meteorology, astronomy, oceanography and earth science
- Urban/regional planner
- Waste management engineer
- Water pollution control technician

Geoscientists

The National Science Foundation considers geology, geophysics, hydrology, oceanography, marine science, atmospheric science, planetary science, meteorology, environmental science and soil science as the major geoscience disciplines.

The American Geological Institute (www.agiweb.org) lists what geoscientists do in these disciplines and a variety of subdisciplines.

Geologists study the materials, processes, products, physical nature and history of the Earth.

Subdisciplines include: Economic geologists, engineering geologists, environmental geologists, geochemists, geomorphologists, mineralogists, petroleum geologists, paleontologists, petrologists, planetary geologists, sedimentologists, soil scientists, stratigraphers, structural geologists and volcanologists.

Geophysicists apply the principles of physics to studies of the Earth's interior and investigate Earth's magnetic, electric and gravitational fields.

Subdisciplines include: Exploration geophysicists and seismologists.

Hydrologists are concerned with water from the moment of precipitation until it evaporates into the atmosphere or is discharged into the ocean; for example, they study river systems to predict the impacts of flooding.

Water related disciplines include: Marine geologists and Oceanographers.

Meteorologists are individuals with specialized education who use scientific principles to explain, understand, observe or forecast the earth's atmospheric phenomena and/or how the atmosphere affects the earth and life on the planet.

Subdisciplines include air pollution meteorology, atmospheric chemistry, global climate modeling, hydrometeorology, numerical weather prediction, solar weather, weather analysis and forecasting.

Contact Info

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Professional Perspective

"A few months ago I was forecasting space weather in Boulder, Colorado. What I liked most about being a space weather forecaster was being a part of an emerging discipline. Space weather is still so young that there aren't very many people doing it, so I was able to define both my role within it and help define the direction space weather as a service is going."

-Matthew Ringel
Space weather forecaster