

# EARTH SCIENCE - B.A.

College of Arts and Sciences  
Department of Earth Sciences  
www.kent.edu/earth-sciences

## About This Program

Our Bachelor of Arts in Earth Science provides you with the knowledge and skills needed to understand the dynamic processes that shape our planet. With a focus on interdisciplinary learning and hands-on experiences, you will be prepared for a variety of careers in the geosciences. Read more...

## Contact Information

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- Speak with an Advisor
  - Kent Campus
  - Stark Campus
- Chat with an Admissions Counselor: Kent Campus | Regional Campuses

## Program Delivery

- **Delivery:**
  - In person
- **Location:**
  - Kent Campus
  - Stark Campus

## Examples of Possible Careers and Salaries\*

### Geological and hydrologic technicians

- 5.5% faster than the average
- 19,000 number of jobs
- \$50,630 potential earnings

\* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics' Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

## Admission Requirements

The university affirmatively strives to provide educational opportunities and access to students with varied backgrounds, those with special talents and adult students who graduated from high school three or more years ago.

**First-Year Students on the Kent Campus:** First-year admission policy on the Kent Campus is selective. Admission decisions are based upon cumulative grade point average, strength of high school college preparatory curriculum and grade trends. Students not admissible to the Kent Campus may be administratively referred to one of the

seven regional campuses to begin their college coursework. For more information, visit the admissions website for first-year students.

**First-Year Students on the Regional Campuses:** First-year admission to Kent State's campuses at Ashtabula, East Liverpool, Geauga, Salem, Stark, Trumbull and Tuscarawas, as well as the Twinsburg Academic Center, is open to anyone with a high school diploma or its equivalent. For more information on admissions, contact the Regional Campuses admissions offices.

**International Students:** All international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning a minimum 525 TOEFL score (71 on the Internet-based version), minimum 75 MELAB score, minimum 6.0 IELTS score or minimum 48 PTE Academic score, or by completing the ELS level 112 Intensive Program. For more information, visit the admissions website for international students.

**Transfer Students:** Students who have attended any other educational institution after graduating from high school must apply as undergraduate transfer students. For more information, visit the admissions website for transfer students.

**Former Students:** Former Kent State students or graduates who have not attended another college or university since Kent State may complete the reenrollment or reinstatement form on the University Registrar's website.

Admission policies for undergraduate students may be found in the University Catalog's Academic Policies.

Some programs may require that students meet certain requirements before progressing through the program. For programs with progression requirements, the information is shown on the program's Coursework tab.

## Program Requirements

### Major Requirements

Code	Title	Credit Hours
<b>Major Requirements (courses count in major GPA)</b>		
CHEM 10060	GENERAL CHEMISTRY I (KBS)	4
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
ESCI 11040	HOW THE EARTH WORKS (KBS)	3
ESCI 11041	HOW THE EARTH WORKS LABORATORY (KBS) (KLAB)	1
ESCI 11042	EARTH AND LIFE THROUGH TIME (KBS)	3
or ESCI 21062	ENVIRONMENTAL EARTH SCIENCE (KBS)	
or ESCI 21080	ALL ABOUT THE OCEANS (KBS)	
ESCI 22000	DEGREE AND CAREER PATHS IN EARTH SCIENCES (ELR)	1
ESCI 23063	EARTH MATERIALS I	4
ESCI 31070	EARTH MATERIALS II (WIC) <sup>1</sup>	4
ESCI 42035	DATA ANALYSIS IN THE EARTH SCIENCES	3
GEOG 49070	GEOGRAPHIC INFORMATION SCIENCE	4
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
Earth Science (ESCI) Upper-Division Electives (30000 or 40000 level) <sup>2</sup>		9
Geography (GEOG) Upper-Division Electives (30000 or 40000 level), choose from the following: <sup>2</sup>		6
GEOG 31062	FUNDAMENTALS OF METEOROLOGY	
GEOG 31064	CLIMATE AND THE ENVIRONMENT	
GEOG 41065	APPLIED CLIMATOLOGY	

GEOG 41066	GLOBAL CLIMATE CHANGE
GEOG 41073	CONSERVATION OF NATURAL RESOURCES
GEOG 49078	GEOGRAPHIC INFORMATION SCIENCE AND ENVIRONMENTAL HAZARDS

**Additional Program Requirements (courses do not count in major GPA)**

UC 10001	FLASHES 101	1
Foreign Language (see Foreign Language College Requirement below)		14-16
Kent Core Composition		6
Kent Core Humanities and Fine Arts (minimum one course from each)		9
Kent Core Social Sciences (must be from two disciplines)		6
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		38
<b>Minimum Total Credit Hours:</b>		<b>120</b>

<sup>1</sup> A minimum C grade must be earned to fulfill the writing-intensive requirement.

<sup>2</sup> Other relevant courses may be substituted in consultation with an advisor.

## Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
2.000	2.000

### Foreign Language College Requirement, B.A.

Students pursuing the Bachelor of Arts degree in the College of Arts and Sciences must complete 14-16 credit hours of foreign language.<sup>1</sup>

To complete the requirement, students need the equivalent of Elementary I and II in any language, plus one of the following options<sup>2</sup>:

- Intermediate I and II of the same language
- Elementary I and II of a second language
- Any combination of two courses from the following list:
  - Intermediate I of the same language
  - ARAB 21401
  - ASL 19401
  - CHIN 25421
  - MCLS 10001
  - MCLS 20001
  - MCLS 20091
  - MCLS 21417
  - MCLS 21420
  - MCLS 22217
  - MCLS 28403
  - MCLS 28404

<sup>1</sup> All students with prior foreign language experience should take the foreign language placement test to determine the appropriate level at which to start. Some students may start beyond the Elementary I level and will complete the requirement with fewer credit hours and fewer courses. This may be accomplished by (1) passing a course beyond Elementary I through Intermediate II level; (2) receiving credit through one of the alternative credit programs offered by Kent State University; or (3) demonstrating language proficiency comparable to Elementary II of a foreign language. When students complete the requirement with fewer than 14 credit hours and four courses, they will complete remaining credit hours with general electives.

<sup>2</sup> Certain majors, concentrations and minors may require specific languages, limit the languages from which a student may choose or require coursework through Intermediate II. Students who plan to pursue graduate study may need particular language coursework.

## Roadmap

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One		Credits
ESCI 11040	HOW THE EARTH WORKS (KBS)	3
ESCI 11041	HOW THE EARTH WORKS LABORATORY (KBS) (KLAB)	1
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
UC 10001	FLASHES 101	1
Foreign Language		4
Kent Core Requirement		3
<b>Credit Hours</b>		<b>15</b>
Semester Two		Credits
ESCI 11042	EARTH AND LIFE THROUGH TIME (KBS)	3
ESCI 22000	DEGREE AND CAREER PATHS IN EARTH SCIENCES (ELR)	1
ESCI 42035	DATA ANALYSIS IN THE EARTH SCIENCES	3
Foreign Language		4
Kent Core Requirement		3
<b>Credit Hours</b>		<b>14</b>
Semester Three		Credits
CHEM 10060	GENERAL CHEMISTRY I (KBS)	4
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
ESCI 23063	EARTH MATERIALS I	4
Foreign Language		3
Kent Core Requirement		3
Kent Core Requirement		3
<b>Credit Hours</b>		<b>18</b>
Semester Four		Credits
ESCI 31070	EARTH MATERIALS II (WIC)	4
GEOG 49070	GEOGRAPHIC INFORMATION SCIENCE	4
Foreign Language		3
Kent Core Requirement		3
<b>Credit Hours</b>		<b>14</b>
Semester Five		Credits
Earth Science (ESCI) Upper-Division Elective (30000 or 40000 level)		3
Geography (GEOG) Upper-Division Elective (30000 or 40000 level)		3
Kent Core Requirement		3
Kent Core Requirement		3
General Elective		3
<b>Credit Hours</b>		<b>15</b>
Semester Six		Credits
Earth Science (ESCI) Upper-Division Elective (30000 or 40000 level)		3
Geography (GEOG) Upper-Division Elective (30000 or 40000 level)		3
General Electives		9
<b>Credit Hours</b>		<b>15</b>

<b>Semester Seven</b>	
Earth Science (ESCI) Upper-Division Elective (30000 or 40000 level)	3
General Electives	12
<b>Credit Hours</b>	<b>15</b>
<b>Semester Eight</b>	
General Electives	14
<b>Credit Hours</b>	<b>14</b>
<b>Minimum Total Credit Hours:</b>	<b>120</b>

## University Requirements

All students in a bachelor's degree program at Kent State University must complete the following university requirements for graduation.

**NOTE:** University requirements may be fulfilled in this program by specific course requirements. Please see Program Requirements for details.

Flashes 101 (UC 10001)	1 credit hour
Course is not required for students with 30+ transfer credits (excluding College Credit Plus) or age 21+ at time of admission.	
Diversity Domestic/Global (DIVD/DIVG)	2 courses
Students must successfully complete one domestic and one global course, of which one must be from the Kent Core.	
Experiential Learning Requirement (ELR)	varies
Students must successfully complete one course or approved experience.	
Kent Core (see table below)	36-37 credit hours
Writing-Intensive Course (WIC)	1 course
Students must earn a minimum C grade in the course.	
Upper-Division Requirement	39 credit hours
Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate.	
<b>Total Credit Hour Requirement</b>	<b>120 credit hours</b>

## Kent Core Requirements

Kent Core Composition (KCMP)	6
Kent Core Mathematics and Critical Reasoning (KMCR)	3
Kent Core Humanities and Fine Arts (KHUM/KFA) (min one course each)	9
Kent Core Social Sciences (KSS) (must be from two disciplines)	6
Kent Core Basic Sciences (KBS/KLAB) (must include one laboratory)	6-7
Kent Core Additional (KADL)	6
<b>Total Credit Hours:</b>	<b>36-37</b>

## Program Learning Outcomes

Graduates of this program will be able to:

1. Understand and communicate to others:
  - a. The nature of scientific investigation and evidence.
  - b. The complex interrelationships of the biosphere, atmosphere, hydrosphere and the lithosphere through geologic time.
2. Understand Earth materials and interpret geologic and environmental processes.

3. Synthesize geologic information to understand and solve geologic and environmental problems.
4. Demonstrate critical thinking skills.
5. Work as a geologist in the field and in the laboratory.

## Full Description

The Bachelor of Arts degree in Earth Science is ideal for students interested in broad interdisciplinary study of the key natural and physical processes that shape the planet, leading to potential careers in environmental or earth system fields. The program requires courses in physical geology, minerals and rocks and geographic information science. Most geology courses have extensive (one-to-three-day) excursions that allow students to obtain valuable field experience.

Graduates have opportunities for employment in a wide variety of careers where an understanding of natural science is useful or critical in success. Earth science can be a strong background for advanced study or career development in areas such as business, city management, regional development, planning, law, journalism and science writing.