Who will I work with?

Carpenter, Philip J., Ph.D., New Mexico Institute of Mining and Technology, professor, geophysics

Dodd, Justin P., Ph.D., University of New Mexico, assistant professor, stable isotope geochemistry

Fischer, Mark P., Ph.D., The Pennsylvania State University, professor and chair, structural geology, rock deformation

Frank, Mark R., Ph.D., University of Maryland, associate professor and director of graduate studies, mineralogy, experimental mineralogy, experimental geochemistry

LaDue, Nicole D., Ph.D., Michigan State University, assistant professor, geoscience education

Lenczewski, Melissa E., Ph.D., University of Tennessee, associate professor, geomicrobiology, organic geochemistry, contaminant hydrogeology

Powell, Ross D., Ph.D., The Ohio State University, professor, sedimentology, glacial processes, climate change

Scherer, Reed P., Ph.D., The Ohio State University, professor, paleontology, biostratigraphy

Stansell, Nathan D., Ph.D., University of Pittsburgh, assistant professor, stratigraphy, climate change, glacial geology

Stoddard, Paul R., Ph.D., Northwestern University, associate professor, tectonophysics, geophysics

Walker, James A., Ph.D., Rutgers University, professor, igneous petrology, volcanology

Can I get a job?

Secondary science teachers are in high demand. In response to Illinois’ decision to implement of the Next Generation Science Standards (NGSS) in the 2016-2017 school year, our licensure program is preparing students to deliver inquiry-based science aligned to the Performance Expectations of the NGSS. This places our graduates at the cutting edge of Illinois science teaching, and makes them highly sought after by schools around the state.

• Our program has adopted the new state-mandated expectation for licensure, the edTPA, an electronic, portfolio-based system of student assessment.

• External evaluation of recent student edTPA data resulted in scores that were well above the state minimum score that will be implemented in 2016.

Have questions?

Visit our website:
http://www.niu.edu/geology/index.shtml

Get answers to your questions:
askgeology@niu.edu

Call us:
815-753-1943
Students should choose this emphasis if they want an Illinois license to teach at the high school level. Teaching is a challenging and rewarding profession that gives you the rare privilege of shaping the minds and lives of young students.

Teach a wide variety of science subjects: Students graduating in this emphasis will be licensed to teach regular high school biology, chemistry, and physics, as well as earth and space science at the regular and honors level.

When choosing, consider these things:
- All candidates must pass a criminal background check before entering schools
- All candidates must pass subject matter content tests just prior to student teaching
- All students must pass the Illinois Test of Academic Proficiency (TAP). This test is not required for students with a composite ACT score of 22 and an English and Writing ACT score of 19 or above.
- Students in this emphasis must maintain a minimum cumulative GPA of 2.5, and a GPA of 2.7 in all NIU courses numbered 200 and above in all physical, biological, and mathematical science courses.
- Students in this emphasis must earn a C or higher grade in all content and education coursework.
- Students are responsible for timely submission of several applications and required test results during the program.

### Why choose the Earth and Space Science Education emphasis?

Transfer students should complete a semester of courses in physical geology, general chemistry with laboratory, and the first semester of calculus before entering NIU. Meet with the emphasis advisor, Dr. Nicole LaDue (nladue@niu.edu), as early as possible.

### Curriculum for this emphasis

#### Total Requirements: 98 Credit Hours (not including Foundation Courses)

#### A) Requirements in Department (54 credit hours)

- GEOL 103 Planetary and Space Science (3 hrs)
- OR PHYS 162 Elementary Astronomy (3 hrs)
- GEOL 120 Introductory Geology (3 hrs)
- GEOL 121 Introductory Geology Lab (1 hr)
- GEOL 322 Paleogeography, Paleoclimatology, Paleoecology (4 hrs)
- GEOL 425 Solid Earth Composition (4 hrs)
- GEOL 429 Inquiry-Based Field Experiences for Earth Science Teachers (3 hrs)
- GEOL 475 Science Across Time and Culture (2 hrs)
- GEOL 483 Interdisciplinary Teaching of Science in Secondary Education (3 hrs)
- GEOL 482 Transition to the Professional Teacher (2 hrs)
- GEOL 487 Student Teaching (10 hrs)
- GEOL 495 Methods in Teaching Earth and Space Science (3 hrs)

#### One of the following:

- GEOL 344X Astronomy (3 hrs)
- GEOL 419 Elements of Geochemistry & Cosmochemistry (3 hrs)
- GEOL 420 Geochemistry of the Earth's Surface (3 hrs)
- GEOL 427 Planetary Geoscience (3 hrs)
- GEOL 458X Vertebrate Paleontology (3 hrs)
- GEOL 460 Plate Tectonics (3 hrs)
- GEOL 470 Invertebrate Paleontology (3 hrs)
- GEOL 496 Geophysics (3 hrs)

#### B) Requirements Outside Department (32 credit hours)

- BIOS 208 Fundamentals of Biology I (3 hrs)
- BIOS 210 Fundamentals of Biology I Lab (1 hr)
- BIOS 209 Fundamentals of Biology II (3 hrs)
- BIOS 211 Fundamentals of Biology II Lab (1 hr)
- CHEM 210 General Chemistry I (3 hrs)
- CHEM 212 General Chemistry Lab I (1 hr)
- CHEM 211 General Chemistry II (3 hrs)
- CHEM 213 General Chemistry Lab II (1 hr)
- GEOG 105 Introduction to the Atmosphere (3 hrs)
- GEOG 106 Introduction to the Atmosphere Lab (1 hr)

- PHYS 210 General Physics I (4 hrs) and PHYS 211 General Physics II (4 hrs)
- OR
- PHYS 253 Fundamentals of Physics I: Mechanics (4 hrs) and PHYS 273 Fundamentals of Physics II: Electromagnetism (4 hrs)

- MATH 229 Calculus I (4 hrs)
- OR
- MATH 155 Trigonometry and Elementary Functions (3 hrs) and MATH 211 Calculus for Business and Social Sciences (3 hrs) and STAT 301 Elementary Statistics (4 hrs)

#### C) Educator Coursework (12 credit hours)

- EPS 406 Issues in Human Development & Learning (3 hrs)
- ETT 402 Teaching and Learning with Technology (3 hrs)
- ILAS 201 Introductory Clinical Experience (1 hr)
- ILAS 301 Second Clinical Experience (2 hrs)
- SESE 457 Methods for Including Secondary Students with Exceptionalities in the General Education Classroom (3 hrs)

### How do I get admitted?

There are no special requirements for admission to the B.S. program in Geology and Environmental Geosciences. Use the link below to see NIU's admission requirements.

[http://www.niu.edu/admissions/index.shtml](http://www.niu.edu/admissions/index.shtml)

### Advising is key!

Dr. Nicole LaDue (nladue@niu.edu) is the advisor for the Earth and Space Science Education emphasis.

- Students seeking Earth and Space Science licensure must schedule an interview with Dr. LaDue to formulate a plan of study.
- A student's program of courses for meeting licensure requirements must be approved by the licensure coordinator each semester before registering for classes.