

## Geology



Nearby Pulpit Rocks, Huntingdon, Pa.

### The Juniata Advantage

- **Environment:** Just minutes from campus, explore sites that show geology in all of its glory: sedimentary rocks, massive outcroppings, stone structures, caverns, and diverse fossils. Indeed, **our region is ideal** for studying Geology.
- **Course Design:** The curriculum design allows graduates the freedom to obtain the Pennsylvania professional geology certificate from the Pennsylvania Department of State without taking extra field camp classes. This is a time and cost savings benefit for our graduates.
- **Facilities:** As early as sophomore year, Juniata geology students gain access to sophisticated and high-precision instruments including a JEOL Scanning Electron Microscope, an X-Ray diffractometer, Zeiss and Leitz petrographic microscopes, and more. Students also have ready access to **our rock, fossil, and mineral preparation labs**, which include facilities for crushing, cutting, polishing and sectioning samples, and performing grain-size analyses.

### Juniata's Outcomes

Our graduates who seek entry-level positions directly related to their degrees are typically **hired within weeks of graduation**. And, 100 percent of our graduates who apply to graduate schools to pursue master's and doctoral degrees are **admitted with full funding**. Many have been awarded **prestigious fellowships**.

### Our Recent Graduates

- Monica McGrath '13 is **employed in material science at R.J. Lee group**, in Monroeville, Pa., where she interned prior to graduating.
- Justin Paul '12 completed his **master's degree in earth sciences at the University of Memphis** and is now **employed as an environmental scientist** at Groundwater and Environmental Sciences, Inc., in Cranberry, Pa. Justin's undergraduate success included an Environmental Protection Agency Greater Research Opportunities scholarship that landed him an internship with the USDA.
- Paula Pryor '14 is currently enrolled in **graduate school at Illinois State University**.
- Pat Rea '15 is pursuing a graduate degree at University of Texas-El Paso. He has received a **full scholarship** to attend this program.
- Tyler Thomas '12 is currently **employed as a mud logger at Seiman & Associates** in Midland, Texas.

*"I love the Geology program because it is like a small community. I can walk into my professors' offices anytime and they are more than willing to help me. I've also learned a lot of skills from the required field trips along with the labs I've taken that most undergraduate programs do not offer."*

—Arielle Maines '15

GEOLOGY

### A Sampling of Courses

Death and Destruction by Nature  
Energy, Minerals, and Society  
Environmental Geochemistry  
Evolution of You  
Field Methods 1 & 2  
Geophysics  
Global Climate Change  
Historical Geology  
Mineralogy  
Oceanography  
Paleobiology and Paleocology  
of Invertebrates  
Petrography  
Petrology of Igneous and  
Metamorphic Rocks  
Sedimentology Soil  
Science  
Stratigraphy  
Structural Geology



## A Geology POE Story

From your very first course in geology, you will begin to explore Juniata's greatest asset—its location. Get out into the field at least 10 times during your first year at Juniata, by taking two important courses: Introduction to Environmental Science and Studies and Introduction to Physical Geology, which is accompanied by a lab.

Throughout your studies at Juniata, field experience will continue to play a key role. **Undergraduate research, internships, and distinctive offerings**—like studying at **Raystown Field Station** or taking the **Remote Field Course** are just a few ways you can gain the observational and analytical skills needed to tackle serious issues like environmental site assessment, environmental remediation, natural hazards mitigation, and minerals and fuels resource exploration. In fact, professors take advantage of the opportunity to discuss regional phenomenon—like Marcellus shale fracking—in courses and undertake related research.

In addition to a designated POE in **geology**, Juniata now offers a Program of Emphasis in **environmental geology**, which allows students to pursue a growing career field that addresses water management, energy resources, pollution, climate change, and land use.

Add some serious coaching in writing and oral delivery, and you've got a combination that prepares you well for a career or graduate school.

*"I like studying geology at Juniata because the professors are very knowledgeable," says David Knecht '15. "We spend a lot of time in the field applying what we have learned in class."*

## Faculty

At Juniata, **93 percent** of faculty hold the highest degree in their field. In the geology department, 100 percent of faculty have earned Ph.D.s and, although they are practicing paleontologists and geochemists, they are, first and foremost, professors. They've published in *Earth and Planetary Science Letters*, *Journal of South American Earth Sciences*, *Mineralium Deposita*, *Geology*, and *Economic Geology*. Their work has been supported by the National Science Foundation and NASA. To read more about the geology faculty of Juniata, visit: [www.juniata.edu/academics/departments/geology/faculty.php](http://www.juniata.edu/academics/departments/geology/faculty.php)

Geology Department Chair: Ryan Mathur, B.A., Juniata College, Ph.D., University of Arizona.



Remote Field Course

## Student Opportunities

**Remote Field Course:** Join Juniata's Remote Field Course and learn geology, ecology, psychology, anthropology, physics, and other disciplines in various locations in the western U.S.

**Study Abroad:** India, Ecuador, England, New Zealand, Germany, and Australia are popular sites to study geology abroad. But don't limit yourself. **Juniata has programs on every continent** except Antarctica.

**Internships:** In the past two years, geology students from Juniata have interned at the **Environmental Protection Agency**, **Lincoln Caverns**, and the **Bradford County Conservation District**. Several have also interned on summer undergraduate research projects with geology faculty.

**Undergraduate Research:** In the last decade, Juniata geology faculty have published **more than a dozen peer-reviewed journal articles with student co-authors**. They've **presented more than 32 times at conferences**. Students also routinely present their research findings at Geological Society of America professional meetings and at Juniata's Liberal Arts Symposium. **Recent examples** include: Arielle Maines '15, "Chloride and Nitrate Concentrations in Huntingdon County Waterways," Caleb McMullen '14, "Iron Oxide Staining in the Tuscarora Sandstone."



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