



**Students and Faculty  
at the Pacayá Volcano  
Departmental Field Trip to Guatemala  
(April 2026)**



**Students and Faculty at the Parguera Fault  
with USGS personnel, March 2026.**

**University of Puerto Rico  
Mayagüez Campus  
Faculty of Arts and Sciences  
Department of Geology**

## **Bachelor's in Geology**



**Call Box 9000  
Mayagüez, PR 00681-9000  
Tel.: (787) 265-3845  
(787) 832-4040  
Exts. 2709 o 3845**

### **Introduction**

The Department offers courses leading to the Bachelor of Science degree in Geology. This brochure provides information about the Department and guides new and future students.

### **Department**

Our Department at the University of Puerto Rico at Mayagüez is the only geology department in Puerto Rico. We have 11 faculty positions, 2 researcher positions, approximately 150 undergraduate students, and 15 graduate students. Department courses are taught in English and Spanish. All faculty members in the department are actively involved in research, and students are encouraged to participate in these research initiatives.

The Puerto Rico Seismic Network is part of the Department of Geology. The primary duties of the Network include the installation and maintenance of seismic stations; the processing, analysis, and distribution of data; and public education regarding earthquakes, tremors, and other natural phenomena. Geology students, as well as students from other departments, work at the Puerto Rico Seismic Network, particularly in the areas of data analysis and processing.

### **Courses**

Incoming first-year geology students begin by taking two core courses: Earth Sciences (GEOL-3025), History of Life (GEOL-3026), and an Introductory Laboratory (GEOL-3047). These are followed by a series of required courses taken during their second and third years: Morphological and Optical Crystallography (GEOL-3055), Crystal Chemistry and Geochemistry of Mineral Systems (GEOL-3056), Geomorphology (GEOL-4017), Structural Geology (GEOL-4006), Petrogenesis and

Crystalline Rocks (GEOL-4045), Sedimentary Environments and Lithogenesis (GEOL-4046), and Stratigraphy (GEOL-4009). During the summer between their third and fourth year, students take a Field Geology course (GEOL-4018), which is a graduation requirement. During their final year, students take six credits of geology electives, two Seminar courses (GEOL-4011 and 4012), and four Research credits (GEOL-4049 and 4055).

Students may choose their geology electives, as well as their research topics, based on their interests. Research topics are discussed and approved by faculty members at the beginning of the project.

Department students are advised to take their free electives in the specific area of geology in which they plan to specialize. Recommended electives outside of the Department may be in Biology, Chemistry, Physics, Mathematics, Engineering, Agriculture, or Economics.

The curriculum also requires mathematics up to Calculus II, a Computer Science course, and the Physics sequence 3151-3154, in addition to college requirements, which include: Biology (CIBI-3031-3032), Chemistry (QUIM-3131-3132), English (6 credits at the advanced level), Spanish (6 credits at the advanced level), Humanities (HUMA-3111-3112), and 6 credits in Social Sciences (CISO, SOCI, PSIC, HIST, ECON, ANTR, GEOG, CIPO).

**Brochure available at:**

<https://www.uprm.edu/geology/department-and-degree-information/>

**Updated: May-2026**

## CURRICULUM

### First Year

Curso	Crs	Curso	Crs
GEOL 3025	3	GEOL 3026	3
GEOL 3047	1	MATE <sup>1</sup> 3172	3
MATE 3171	3	QUIM 3132	3
QUIM 3131	3	QUIM 3134	1
QUIM 3133	1	INGL _____	3
INGL _____	3	ESPA _____	3
ESPA _____	3		16
	17		

### Second Year

GEOL 3055	3	GEOL 3056	3
GEOL 4017	3	GEOL 4006	3
CIBI 3031	3	CIBI 3032	3
MATE 3031	4	MATE 3032	4
INGL _____	3	INGL _____	3
	16		16

### Third Year

GEOL 4045	3	GEOL 4009	3
GEOL 4046	3	LIBR _____	3
FISI 3151	3	LIBR _____	3
FISI 3153	1	FISI 3152	3
COMP _____	3	FISI 3154	1
ESPA _____	3	ESPA _____	3
EDFI _____	1	EDFI _____	1
	17		17

### Summer

GEOL 4018	6
-----------	---

### Fourth Year

GEOL 4011	1	GEOL 4012	1
GEOL 4049	2	GEOL 4055	2
ELEC GEOL	3	ELEC GEOL	3
RECO _____	3	RECO _____	3
LIBR _____	3	LIBR _____	3
CISO _____	3	CISO _____	3
HUMA 3111	3	HUMA 3112	3
	18		15

Total number of credits: 141

These courses can be disregarded if the student has taken advanced placement score exams with the required grade point average.

Science Electives (not Geology), Mathematics, Engineering, Agronomy and Economics.

Courses in socio-humanistics, to choose from: CISO, SOCI, HIST, ANTR, PSIC, GEOG, CIPO y ECON.

## TRANSFERS

### Internal Transfers: less than 30 crs.

#### GPA 3.00

Favorable interview with the Director  
Satisfactory academic progress

### Internal Transfers: more than 30 crs.

#### GPA 3.00

Favorable interview with the Director

Have Approved:

MATE 3171-3172

INGL 3101-3102

ESPA 3101-3102

One of three sequences in Biology, Chemistry or Physics:

CIBI 3031-3032 o QUIM 3131-3132 o FISI 3151-3152 y

GEOL 3025 y GEOL 3047 o GEOL 4015

### External Transfers:

#### GPA 3.00

Favorable interview with the Director

Have Approved:

MATE 3171-3172

INGL 3101-3102

Two of three sequences in Biology, Chemistry or Physics:

CIBI 3031-3032 o QUIM 3131-3132 o FISI 3151-3152

### Professional Electives in Geology

GEOL 4005 Elemental Paleontology

GEOL 4016 Geology Applied to Engineering

GEOL 4019 Geology Economics

GEOL 4037 Volcanoes and their Risks

GEOL 4047 Introduction to Geochemistry

GEOL 4048 Geological Applications of Remote Perception

GEOL 4057 Environmental Geophysics

GEOL 4059 Volcanology Physics

GEOL 4060 Geological Cartography and Geodesy

GEOL 4105 Hydrogeology

GEOL 5005 Marine Geology

GEOL 5006 Sedimentation

GEOL 5008 Micropaleontology

GEOL 5011 Principle of Paleontology

GEOL 5015 Optical Mineralogy

GEOL 5020 Geophysics

GEOL 5025 Geology of the Caribbean

GEOL 5026 Tectonics

GEOL 5027 Global Tectonics and Methanogenesis

GEOL 5565 Seismology

GEOL 5605 Geologic Disasters

## Recommended Electives in Science:

AGRO 3011	BIOL 4467	INCI 4079	MATE 4071
AGRO 3013	CIMA 5005	INCI 4085	MATE 4072
AGRO 4005	CMOB 5017	INCI 4088	METE 4006
AGRO 4015	CMOB 5018	INCI 4135	METE 4007
AGRO 4016	CMOF 5005	INCI 4138	METE 4008
AGRO 4018	CMOF 5015	INCI 4139	METE 4057
AGRO 4029	CMOG 5001	INCI 5008	QUIM 3025
AGRO 4035	COMP****	INGE 3015	QUIM 3055
AGRO 4990	ECON 4028	INGE 3016	QUIM 3065
AGRO 5008	ECON 4056	INGE 3025	QUIM 3071
AGRO 5015	ESMA****	INGE 3031	QUIM 3072
ASTR 4005	FISI 4008	INGE 3032	QUIM 3085
ASTR 4006	FISI 4105	INGE 4001	QUIM 3461
ASTR 5005	FISI 4116	INGE 4010	QUIM 3462
ASTR 5007	FISI 4125	INGE 4011	QUIM 3463
BIOL 3125	FISI 4997	INGE 4015	QUIM 3464
BIOL 3417	FISI 5007	INGE 5996	QUIM 4015
BIOL 3425	INCI 4001	MATE 3062	QUIM 4085
BIOL 3435	INCI 4002	MATE 4009	QUIM 4041
BIOL 3770	INCI 4008	MATE 4010	QUIM 4042
BIOL 4015	INCI 4032	MATE 4020	QUIM 4101
BIOL 4025	INCI 4039	MATE 4031	QUIM 4102
BIOL 4335	INCI 4051	MATE 4061	TMAG 5008
BIOL 4465	INCI 4052	MATE 4062	

### Non-Accepted Free Electives:

ESPA 3215

### Non-Accepted Professional Electives:

GEOL 3027 GEOL 3067 GEOL 3045 GEOL 3046

GEOL 4015 GEOL 3105 GEOL 3028 GEOL 3070

## FACULTY

**F. Gilbes**, PhD, University of South Florida, Ambient Remote Perception, F-411

**T. Hudgins**, PhD, University of Michigan, Geochemistry and Petrology, F-416

**V. Huérfano**, PhD, University of Puerto Rico, Mayagüez Campus, Tsunamis and Seismology, Build. D

**K. S. Hughes**, PhD, North Carolina State University, Structural Geology, F-414

**J. Joyce**, PhD, Northwestern University, Tectonics, F-409

**A. López**, PhD, Northwestern University, Seismology and Tectonics, F-417-B

**R. Quintero**, PhD, Curtin University, Mineralogy, Geochemistry, F-415

**W. Ramírez**, PhD, Tulane University, Carbonate Sedimentology, Petrology and Diagenesis, Coral Reefs, Coastal Processes, F-410

**L. Rodríguez**, PhD, Michigan Technological University, Volcanology, Volcanic Hazards; Dept. Director, F-412

**H. Santos**, PhD, University of Colorado, Paleontology, Caribbean Biostratigraphy, Regional Geology, F-408

**E. Vanacore**, PhD, Rice University, Geophysics, Seismology, Edif. D

## PERSONAL NO DOCENTE

**Sr. Ramón M. Colón Vargas**, Lab Assistant, F-202

**Sra. Yelitza I. González Colón**, Scientific Instrumentation Specialist, F-106

**Srta. Stephanie M. González Morales**, Lab Technician I, F-307

**Sra. Marsha Irizarry Molina**, Administrative Official I, F-419

**Sra. Jessica Quiñones Bracero**, Administrative Official I, F-403

**Sr. Robert Ropiza Rivera**, Technical Services Coordinator I, F-413

**Sr. Miguel A. Santiago Rivera**, Scientific Instrumentation Specialist, F-304

## RED SÍSMICA DE PUERTO RICO (EDIFICIO D)

**Dr. Víctor A. Huérfano Moreno**, Director

**Sra. Yamilette Vargas Rivera**, Adm. Offic. I

**Sra. Dalixza Irizarry Martínez**, Adm. Assis. IV

**Sra. Annie M. Plaza Rodríguez**, Adm. Assis. II

**Sra. Gisela Báez Sánchez**, Inv. Aux. III



Students and faculty at pyroclastic flow deposits of Fuego Volcano, Guatemala (abril 2026)