1. Who we are:  Earth and Planetary Sciences

We are a small department

22 professors, ~8 PhD researchers/instructors; we teach >35 courses
6 staff members (including 1 IT Specialist, 1 Museum Director)
30 majors, 20 minors, ~30 graduate students (MS, PhD)

Department Chair: Prof. Greg Mountain, gmtn@eps.rutgers.edu
Associate Chair: Prof. Ying Fan Reinfelder, yingfan@eps.rutgers.edu
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Visit our website: eps.rutgers.edu

Hello! Thanks for visiting. Earth & Planetary Sciences is a department
in the School of Arts & Sciences. You can find most of us in Wright
Labs on Busch Campus, but the Geology Museum on Old Queens
also is a part of EPS.

Unlike other science depts in SAS, EPS is a small department, with
~30 majors and 20 minors, so we are close knit family where
everyone knows everyone else.

Feel free to contact any members of department leadership, but
most important to you is the Undergraduate Director: Prof Roy
Schlische, who will be your main advisor in navigating the courses /
requirements, senior research, etc.

You can find out a lot more from our webpage. The featured story is
of Prof. Wright and students on research cruise.
1. Who we are: Earth and Planetary Sciences

Examples of our world-class faculty

Prof. Juliane Gross hunting for meteorites in Antarctica ➔ the origin of our solar system

Prof. Bermingham studies lunar rock samples ➔ evolution of solar system

Prof. Miller, Wright, Sherrell, Rosenthal drilling sea-floor ➔ climate and sea-level in the past recorded in sea-floor sediments

Prof. Falkowski, Yee, Kopp ➔ the origin of life on Earth and other planets

Prof. Ojha studies water on Mars, and how mountains grow/shrink

Prof. Feibel and Lepre reconstructing paleo-environment for early human evolution

Despite being small, we have a world-class faculty, with 3 National Academy of Sciences members. Here are a few examples, showing Prof. Gross searching for meteorites in Antarctica, Prof. Bermingham analyzing Apollo samples to decipher history of the moon; Profs. Miller, Wright, Sherrell, and Rothenthal drilling into ocean sediments to retrieve records of past climate; Profs. Falkowski, Yee and Kopp studying the origin of life and co-evolution of life and the environment; Prof Ojha discovering that these streaks on Mars are related to ice melting and moving down the crater; and Profs. Feibel and Lepre in Africa looking at the sediments recording past environments when and where humans evolved.
1. Who we are: Earth and Planetary Sciences

Small but vibrant student body

We have a vibrant and close-knit student body. Our undergrad Geology Club organize fun and educational outings and invite alums to talk about life (and careers) after graduation.

Given our size, our major classes are small, usually less than 15, allowing lots of student / instructor interaction.

Our undergrads are involved in research in faculty labs; 60% of Class of 2021 students did research projects. Student projects are supported by alumni-funded grants. Students have gotten internships at NASA and the U.S. Geological Survey.

Many courses have a field component. Students also take geology field camps, with part of expenses covered by alumni-funded awards.
1. Who we are: Earth and Planetary Sciences

We love the great outdoors

Nature inspired us to become Earth scientists in the first place.
1. Who we are: **Earth and Planetary Sciences**

We love science but could not choose just one (so we are physicists, chemists, biologists, mathematicians, computer scientists, and historians, ALL IN ONE).

Earth is a complex system where physics-chemistry-biology work together, and we have to approach it that way.
2. What we offer: 4 Major options, 2 Minor options

**Major**

**Geological Sciences Option**
B.S., 62 credits

**Environmental Geology Option**
B.S., 63 credits

**Planetary Science Option**
B.S., 63 credits

**Liberal Arts / General Option**
B.A., 40 credits

**Minor**

**Earth and Planetary Sciences**
6 EPS courses

**Astrobiology**
4 EPS, 2 Astrophysics or Microbiology / Evolutionary Biology courses

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**Geological Sciences (BS):** For students who expect to make geology an important component of their career, e.g. in engineering / environmental consulting, oil & gas & mineral exploration and mining, and federal and state government; grad school.

**Environmental Geology (BS):** For students who plan to work in environmental sector (largest employer of geoscientists in the U.S.), with focus on characterizing modern shallow subsurface environment; grad school.

**Planetary Science (BS):** For those who wish to pursue a research career in planetary science, e.g. in universities, research institutions and museums; strong math, physics, chemistry and/or biology; for math, physics, chemistry, biology transfer students.

**Liberal Arts / General Option (BA):** For students with interests in Earth and planetary sciences but plan for careers in science education/communication and journalism, medicine, environmental law and policy, and business, etc.
3. What courses you should take…
...to get you started

Introduction courses:
01:460:100 Planet Earth (3 cr): for non-majors
01:460:101 Introductory Geology (4 cr): for majors & minors
01:460:116 Building Blocks of Solar System (3 cr)

Survey Courses:
01:460:201 Earthquake & Volcanoes
01:460:202 Environmental Geology
01:460:203 Building & Maintaining a Habitable Planet
01:460:204 Water Planet
01:460:206 Dinosaurs
01:460:207 Oil & Gold: the Good, the Bad, the Ugly
01:460:212 Earth & Life Through Time
01:460:213 Walk Thru Time: Evolution of Mammals
01:460:222 Planet Mars
01:460:224 Geology of Moons & Planets
01:460:225 Astrobiology

Signature Course:
01:460:110 Sea Change: Rise & Fall of Sea Level & Jersey Shore

To view course offerings, go to: https://sis.rutgers.edu/soc/#home
Select semester; then click on New Brunswick & Undergraduate; then select 460: Geological Sciences

The courses listed here offer a window into our profession. All satisfy the Natural Sciences core requirement; some also satisfy the Contemporary Challenges: Our Common Future core requirement.

If you are interested in major/minor, take 460:101 first, which is required in all major options and the EPS minor. You can declare major/minor anytime after you complete this course with a grade of C or higher.
4. What to do with a B.S. degree: Jobs upon graduation

The 4 Major options:
1. Geological Sciences
2. Environmental Geology
3. Planetary Sciences
4. General (Liberal Arts)

40% of grads get jobs in environmental services, working to protect and clean up the environment (water, soil, aquifers)
4. What to do with a B.S. degree: Jobs upon graduation.

Chart compares median annual salaries for all Earth-science related occupations to all U.S. occupations. Geoscientists make up the largest proportion of our graduates. Starting salaries are $50-60,000.

Source: American Geological Institute
Earth & Planetary Sciences → Careers that make a world of difference

We are a small department, with world class faculty, and a small and vibrant student body...
We love the great outdoors, and we love all sciences but could not choose just one...
We care deeply about our planet, its past, its present and its future, and we want to make a difference...

We invite you to join us, and

(1) Be a physicist, chemist, biologist, mathematician, computer scientist, and historian all at once
(2) Save lives by understanding natural disasters (earthquakes, volcanoes, floods, landslides...)
(3) Reduce the impact of humans on the environment to put our planet on a sustainable path
(4) Find the resources that society needs (minerals, energy, groundwater...)
(5) Explore how the Solar System, Earth, and life formed and evolved
(6) Secure a meaningful, rewarding and well-paid job
(7) Choose from 4 programs / career paths based on your personal interests and strengths
(8) Join a tight-knit community for the 4 career-formative years in your life.

Our planet needs your talent and your passion