

THE EARTH INSTITUTE CENTER for ENVIRONMENTAL SUSTAINABILITY (EICES)

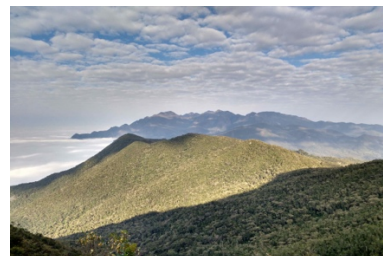
SEE-U 2018

SUMMER ECOSYSTEM EXPERIENCES for UNDERGRADUATES

Earn science credits and explore ecosystems!

BRAZIL: Tropical Forest Ecosystems

- Learn about tropical forest ecology in the Atlantic Rainforest, a rapidly developing region rich in biodiversity and home to several endangered primates
- Explore the coastal and interior forest regions of São Paulo State
- Observe tropical flora and fauna



JORDAN: Marine and Desert Systems

- Explore the ecology of Jordan from north to south and observe the flora and fauna of marine, wetland, desert, and forest ecosystems
- Snorkel and explore one of the most pristine coral reefs on Earth
- Learn about international environmental policy



NEW YORK: Agroecosystems

- Agroecosystems represent the dominant ecosystem on Earth today
- Explore these systems locally in New York City and regionally at nearby farms
- Classroom sessions on the Columbia University campus with field trips in and around New York City



SEE-U in Brief

- Earn 6 science credits from Columbia University
- There are no prerequisites and students from all majors are welcome to apply
- Gain field experience
- Apply early for to be eligible for fellowship funding

More information on reverse side. Please visit eices.columbia.edu/education-training/see-u for detailed information and to apply. Please email EICES at eices@columbia.edu with questions.

SEE-U GENERAL CURRICULUM

Courses in the SEE-U program consist of lectures, labs, and field-based activities. The program is designed to accommodate both science and non-science majors. No prior field experience is required. All courses are taught in English. Course instruction takes place Monday through Friday or Saturday, with both morning and afternoon sessions.

PROGRAM COSTS

Nonrefundable application fee: US \$25

Nonrefundable deposit: US \$500 (required upon acceptance to the SEE-U Program*)

Tuition for 2018: US \$9,450 (US \$1,575 per credit x 6 academic credits)

Room and board: US \$1,950 (Brazil and Jordan)

US \$850 (New York, **covers room and board on field trips only**)

Airfare is not included; students are responsible for flights to and from course sites and any additional costs (e.g., passport and visa fees, books, supplies).

*The deposit is applied towards course tuition upon successful completion of the SEE-U program.

FELLOWSHIPS

EICES provides need-based awards in amounts up to US \$3,000 for all courses. To apply for an EICES fellowship, please fill out the fellowship section of the application. Students are encouraged to apply early for fellowship consideration.

APPLYING

Students in good academic standing at all accredited colleges or universities may apply. Students must submit:

- Application form (available online)
- Current transcript
- Essay: 500 words describing why you would like to participate in the SEE-U program
- One letter of recommendation from a faculty advisor or instructor (past or present)
- The nonrefundable US \$25 application fee, payable by check or money order to Columbia University

Non-Columbia students are responsible for confirming that credits from the SEE-U program are transferable and may be applied to their academic programs. If you have questions or if your academic advisor would like to speak with one of our faculty members, please call **(+1 212-854-8179)** or e-mail EICES at **eices@columbia.edu**.

Applications are accepted on a rolling basis. Due to a limited number of spaces, students are encouraged to apply early to secure a spot in the course of their choosing.

SEE-U Brazil

The Atlantic Forest & Serra do Mar State Park

6 credits, 5 weeks

Summer 2018: June 1–July 1

Instructor: Dr. Tim Kittel, University of Colorado Boulder

Students participating in the SEE-U Brazil course spend 5 weeks learning about tropical forest ecology and conservation practices in the Atlantic Forest. The Atlantic Forest is geographically and ecologically distinct from the Amazon Forest. The ecosystems within this region include evergreen tropical rainforests, semideciduous tropical forests, mangroves, and high-altitude grasslands. The Atlantic Forest is one of Conservation International's 35 Biodiversity Hotspots, exhibiting both floral and faunal biodiversity and home to over 20,000 species of plants and 2,200 species of mammals, birds, reptiles, and amphibians.



Serra do Mar State Park

In Brazil, you will visit several conservation areas, including Serra do Mar State Park. Here, the rainforest meets the ocean in the largest contiguous protected area of the Atlantic Forest. Containing over 40% of all amphibians, birds, reptiles, and mammals in the region, Serra do Mar State Park is a fascinating location in which to learn about the coastal Atlantic Forest and marine ecosystems of Brazil. While visiting the park, you will also have the opportunity to explore nearby historic Paraty, a preserved Portuguese colonial and Brazilian Imperial town on the Green Coast of Brazil.

The course is hosted by Instituto de Pesquisas Ecológicas (IPÊ), one of the largest environmental non-governmental organizations in Brazil. IPÊ has over 20 years of experience in the successful implementation of mammal, bird, and landscape conservation programs and IPÊ scientists are internationally-recognized experts in species and landscape conservation. IPÊ programs serve as case studies for the SEE-U Brazil course, providing examples of successes in linking efforts to support both environmental sustainability and socioeconomic development. Members of the scientific staff interact with SEE-U students on a daily basis, serving as instructors, guest lecturers, or advisors on individual projects.



Matutu Valley

For more information about the Brazil course and to view an example syllabus, please visit <http://eices.columbia.edu/education-training/see-u/see-u-brazil/>. For more information about the SEE-U program and to apply, please visit <http://eices.columbia.edu/education-training/see-u/>. Please email EICES at eices@columbia.edu with questions.

SEE-U Jordan

Amman, Dana, Wadi Rum, Mujib, Madaba, & Ajloun

6 credits, 5 weeks

Summer 2018: July 2–July 30 (tentative)

Instructor: Dr. Jenna Lawrence, Columbia University

Through a partnership between EICES and The Columbia Global Centers | Middle East, the SEE-U Jordan course provides students with a unique opportunity to study ecosystems, biodiversity, and environmental sustainability in Jordan. Participants in the course learn about marine, desert, and forest ecosystems while traveling the length of the entire country, from Amman in the north to Aqaba in the south.



Dana campsite

In Jordan, you will explore pristine coral reefs while snorkeling and study marine ecology at the Royal Diving Club, a haven for international scientists studying sub-tropical ecosystems. These reefs contain over 350 species of bony fish, rays, hard and soft corals, and turtles. Students will also explore deserts in Dana, visit forests in Ajloun, and float in the Dead Sea to develop an in-depth understanding of ecology in Jordan. Extended stays at the Royal Society for the Conservation of Nature's reserves in Dana, the Wadi Mujib canyon, and Ajloun expose students to the country's varied ecosystems and biodiversity. Cultural highlights during the program include a trip to Petra, one of the New Seven Wonders of the World.

Drawing on current issues in Jordanian resource management, the SEE-U Jordan course explores the interface between science and sustainable development. Students will learn about ecology, evolutionary biology, environmental science, taxonomy, and experimental design. Guest lecturers from government ministries and non-profit organizations provide students with a broad understanding of current issues in sustainable development in Jordan such as freshwater resource management, desertification, biodiversity conservation, and deforestation. The centerpiece of the course is an individual research project through which students learn how to plan, execute, and present on ecological research.



Wadi Mujib Chalet

For more information about the Jordan course and to view an example syllabus, please visit <http://eices.columbia.edu/education-training/see-u/see-u-jordan/>. For more information about the SEE-U program and to apply, please visit <http://eices.columbia.edu/education-training/see-u/>. Please email EICES at eices@columbia.edu with questions.

SEE-U NYC

New York City, Hudson and Harlem Valleys, and New Jersey

6 credits, 6 weeks

Summer 2018: July 2–August 10 (tentative)

Instructor: Dr. Amanda Caudill, Columbia University Adjunct Instructor

One of the most pressing challenges humanity faces this century is how to sustainably produce and distribute food to an ever growing, increasingly urbanized population. Nearly two-thirds of the ecosystems of the world have been converted or are managed to provide food, fuel, and fiber for our current population of 7.2 billion people. Over 44% of land in the United States, for example, is under cultivation; yet, over 12 million children in our country suffer from hunger and one in seven households suffer from food insecurity. By 2050, the world's population is expected to increase by 2 to 3 billion people and there is considerable research and debate on whether we can sustainably feed humanity without further jeopardizing the environment.



Blooming Hill Farm, NY

The SEE-U NYC course provides students an opportunity to examine in-depth agroecosystems. The course makes use of the diverse array of farms and food systems in New York City and its surrounding environs. Lectures introduce students to the foundations of ecosystem ecology and conservation, focusing on agroecosystems such as farms, rooftop operations, pastures, grazing lands, orchards, and plantations. The course also covers food systems, or “food to fork” pathways. SEE-U NYC couples lectures at Columbia University's Morningside Campus with field excursions and lab exercises, allowing students to apply ecological concepts to real-world examples of agroecosystems. Field trips are conducted weekly and include visits to urban farms, small rural and peri-urban farms, and local food purveyors and distributors to expose students to the breadth of local and regional agroecosystems and food systems.



Rise & Root Farm, NY

Please visit <http://eices.columbia.edu/education-training/see-u/see-u-agrofood-systems/> for more information about the NYC course and to view an example syllabus, For more information about the SEE-U program and to apply, please visit <http://eices.columbia.edu/education-training/see-u/>. Please email EICES at eices@columbia.edu with questions.