

**BIEB 138 GS - Biodiversity of the Galapagos island and mainland
Ecuador**
Global Seminars edition

Course Syllabus

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Course description: As part of the Global Seminars program, the course will be taught in Ecuador, where students will experience the biodiversity of the Galapagos Islands and mainland Ecuador. Students must apply and be accepted to the Global Seminar Program in order to enroll. Program or materials fees may apply.

Prerequisite: BILD1 or equivalent.

Learning goals: This course explores the living world at the level of whole organisms, populations, communities, biomes, and ecosystems of the Galapagos islands and mainland Ecuador. Through the lens of evolution, students will be able to understand why there are so many different types of living organisms, including microorganisms, in the Galapagos islands, how they compare to the ones in mainland Ecuador, how they interact with each other, and how those different populations continue to evolve. We will also discuss human impact on the environment and the role of conservation in protecting species diversity of the Galapagos, the Amazon rainforest, and the Cloud forest, as well as the tools used by researchers for species monitoring. Through hands-on experience in the Galapagos Islands and mainland Ecuador, students will be able to see the organisms and topics usually covered in textbooks materialized in front of them.

Textbook: Required - The Galapagos: a natural history (Henry Nicholls). A copy is required (new copy costs \$35; used copy costs \$ 8-19).

Supplemental readings will be provided as PDFs in Canvas.

Assessments: Students' grade will be determined by the following assessments:

- team work
- lab/field journal completion
- written assignments & oral presentations

Schedule

Weeks	Topics	Excursions/Location
1	Introduction to the class	Mitad del Mundo & Quito
	Native and Invasive species & molecular tools for the their characterization	Leon-Reyes lab & Universidad de San Francisco, Quito
2	The Amazon rainforest: why so many species? Introduction to viruses and parasites in the rainforest	Tiputini, Amazon rainforest
	Species conservation & Microbiology of fermented food	Cloud forest & Cocoa farm
3	Introduction to evolutionary biology & Natural selection	Charles Darwin Research Station
	Population & Community ecology	Charles Darwin Research Station
	Birds of the Galapagos Islands: what can we learn from them?	Charles Darwin Research Station
4	Reptiles of the Galapagos: why do they rule the islands?	Seymor Norte, Galapagos
	Microorganisms of the Galapagos islands	San Cristobal, Galapagos
5	Presentations & Research Proposals	Quito

Packing List

Field work

- A notebook (or phone app) to take notes
- “Galapagos: a natural history” by Henry Nicholls

What to pack:

- Water jacket or poncho (rainforest)
- Hiking/treking shoes
- Rubber boots
- 4-5 long-sleeved shirts (rainforest), preferably quick-dry
- 4-5 pairs of long pants (rainforest). Quick-drying pants are recommended.
- Long socks to wear under rubber boots
- Socks
- Shorts & t-shirts
- Swimsuit
- Sandals
- Water shoes or sandals
- Sunglasses, hat, sunscreen.
- Non-spray insect repellent (with DEET for the Amazon forest)
- A flashlight or headlamp (headlamp recommended)
- Reusable water bottle
- A small backpack for walks
- Other toiletries or pharmaceuticals you may need on a regular basis.
- Plastic bags for wet clothes
- Camera
- Binoculars
- Beach towel (preferably quick dry)