

TROPICAL MONTANE ECOLOGY

CAS BI/EE 438/638

4 Credits

Prerequisites: Admission to the Tropical Ecology Program

Broad descriptive ecology of the mountainous areas of the Neotropics covering major ecosystems along with introduction to important groups of plants and animals of the region. General land use and environmental problems in Ecuador will be discussed. Includes most of one week in the field at various sites and elevations.

A total of 12-15 hours of lecture will be presented during two weeks in Quito interspersed with several one- to two-day trips into the surrounding area. Time in the field will be primarily dedicated to exposure to various habitats and the respective flora and fauna. Directed research projects may be completed in the field.

Objectives:

Students are expected to gain a basic understanding of tropical highland ecosystems, their flora and fauna, and the pressures and impacts that they face.

Grading:

Grades are defined by a standard 10-point scale and are based on **participation** in-group activities (10%) ranging from regular class attendance to hikes, the **field notebook** (10%), a final **written exam** (55%), and a **practical exam** (25%).

Tests will be developed from lecture material, field experiences and readings.

Topics: (subject to change)

A general introduction to the Neotropics serves as a prelude to the entire Tropical Ecology Program including aspects of geography, topography, climatology and scientific classifications.

- The ecosystems – general aspects, climate, flora and fauna, special adaptations
- Páramo
- Puna
- Andean forests –
Native *Polylepis*, *Podocarpus*, *Araucaria*, etc.
Introduced *Pinus* and *Eucalyptus*
- Cloud forests
- Biotic distribution and endemism
- Implications of Island Biogeography
- Impacts of geologic history
- Exploitation/human pressures

