

# TROPICAL RAINFOREST ECOLOGY

CAS BI/EE 439/639

4 Credits

*Prerequisites: Admission to the Tropical Ecology Program*

Introduction to ecological principles applied to the functioning of tropical rainforest superimposed on the natural history of the ecosystem. Emphasis is on the Neotropics and a stay of about four weeks in Amazonian Ecuador is included. Conservation and exploitation are discussed.

A total of 30-35 hours of lecture is presented. Time in the rainforest is dedicated to field activities and exposure to various habitats including representative flora and fauna. Directed research projects are to be completed in the field.

## Objectives:

Students are expected to gain a broad understanding of tropical rainforest workings; they should be able to recognize and discuss lifestyles of common groups of plants and animals that are part of the ecosystem.

## 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)

- Introduction to tropical rainforest –
- Distribution, structure, soils, etc.
- Rainforest basics –
- Leafing, flowering and fruiting phenology, pollination, dispersal, seasonality, succession, disturbance
- Rainforest habitats – terra firme, varzea, igapo, etc.
- Characterization of associated aquatic habitats
- Biodiversity – examples and explanations
- Island biogeography and other implications for reserve design
- Specializations – vertebrates and invertebrates
- Co-evolution
- Conservation – human impacts, problems, policies, strategies

