

Conservation Biology and Practice in Brazil's Atlantic Forest Global Seminar
University of Colorado Education Abroad Program
EBIO/ENVS 4340 & 5340

Syllabus – Maymester 2024

T. Kittel, Faculty Director
Gabriela Rezende, Instructor

Course Goals –

The objective of this field course is to give you hands-on experience in principles and practice of conservation biology. The course will be held in a 'conservation crisis' setting—the Atlantic Forest of Brazil. We will explore conservation strategies in this human-dominated biome, where successful strategies can only occur when they address socioeconomic issues.

This global seminar is for upper-division undergraduates and graduate students with an interest in applied conservation biology and human dimensions of environmental change. Method of instruction emphasizes experiential learning through field exercises and research projects. Key to your training will be opportunities to undertake work related to on-going, operational programs of an in-country environmental NGO (non-governmental organization). Such work will be as group workshops and individual research projects.

Dates: 13–30 May 2024 (3 weeks)

Locations: The course will be hosted by the Instituto de Pesquisas Ecológicas (IPÊ; Institute of Ecological Research), a Brazilian environmental NGO (<https://ipe.org.br/en/>). IPÊ has implemented integrated, local community conservation programs for the past 30 years throughout Brazil. The first 4 days will be spent at their Professional Education Campus in Nazaré Paulista, a rural area about an hour from the City of São Paulo.

From there, we'll spend four days on the coast in the Serra do Mar (Sea Mountains) State Park. The Park is part of an extensive biodiversity corridor. Here, we'll hike through this prime example of Atlantic Evergreen Rain Forest and learn about conservation programs of rural communities embedded in the park from their leaders.

For the second half of the course, we will move to one of IPÊ's sites in the drier western part of the Atlantic Forest. The region is the Pontal do Paranapanema, a rural area in western São Paulo state. We will work out of Morro do Diabo State Park and IPÊ's research station in the town of Teodoro Sampaio. This location provides both the socio-ecological context and institutional infrastructure to successfully learn about on-the-ground, community-based conservation solutions – including reforestation, forest corridors, and agroforestry.

Prerequisite: 2000- or higher-level course in EBIO, ENVS, GEOG, ANTH, IAFS, or other discipline related to ecology and/or socioeconomic development (confer with instructor).

Credits: 4. Credits go towards fulfilling major requirements for ENVS Applications; EBIO 4000-series and Lab/Field course; GEOG upper-division course & Physical Geography Track elective; and IAFS Off-Campus Experience-Latin America.

Class size: 12-15 students

Program Resources –

Program overview brochure: <http://abroad.colorado.edu/?go=BrazilGS>

Program Handbook and other pre-departure information will be provided ahead of time.

Key Course Topics –

- 1) The Atlantic Forest
 - a) Biodiversity hotspots – Background
 - b) Atlantic Forest biodiversity – Species and landscapes
 - c) Human-dominated landscapes
 - d) Brazil's Forest Code and National Reserve System
- 2) Conservation biology
 - a) Ecological principles – Review
 - b) Origins and geography of biodiversity
 - c) Biology of species vulnerability
 - d) Conservation medicine
- 3) Threats to biodiversity
 - a) Drivers of habitat loss and fragmentation
 - b) Climate change
 - c) Disruption of global biogeochemical cycles
- 4) Conservation practical approaches
 - a) Linking human community sustainable development and conservation
 - b) Restoring connectivity in human-dominated landscapes
 - c) Ecosystem services – Watershed integrated assessment
 - d) Environmental education
 - e) Application of indigenous knowledge
 - f) Conflict resolution

Program Staff –

Faculty Director/Instructor: Dr. Timothy Kittel is a research ecologist and climate scientist at CU's Institute of Arctic and Alpine Research (INSTAAR). He teaches winter and summer field ecology courses at CU's Mountain Research Station and has been teaching conservation biology field courses in Brazil and the Caribbean for the past two decades. Dr. Kittel's teaching approach emphasizes experiential learning. email: kittel@colorado.edu; website: <http://instaar.colorado.edu/~kittel/>.

Instructor: Gabriela Cabral Rezende (PhD Wildlife Conservation) is a research scientist at IPÊ. She is Coordinator for IPÊ's conservation program for the Black Lion Tamarin, a rare and highly endangered primate found only in the Atlantic Forest of São Paulo state. email: gabriela@ipe.org.br.

Director's Assistant: Derek Sweeney (MS Ecology & Evolutionary Biology) is a Lecturer in EBIO. Derek has been part of the Brazil Global Seminar instructional staff since its inception in 2011 and has traveled extensively in South America and elsewhere overseas. email: Derek.Sweeney@colorado.edu.

Textbooks – Copies of all readings will be available on-site, no charge.

1) *The Atlantic Forest of South America: Biodiversity Status, Threats, and Outlook*. Carlos Galindo-Leal & Ibsen de Gusmão (eds). 2003. Island Press. ISBN-10: 155963989X. Out of print. If you're interested in having your own copy, a reasonable used copy should be ~\$40; see:

<http://www.bookfinder4u.com/IsbnSearch.aspx?isbn=155963989X&mode=direct>.

2) *Conservation Biology for All*. Navjot Sodhi & Paul Ehrlich (2010): Oxford University Press. ISBN 9780199554232. Free online:

http://www.conbio.org/images/content_publications/ConservationBiologyforAll_reducedsize.pdf

Evaluation and Grading –

Evaluation is based on written assignments, individual research project, participation in field and in-class activities, and a field journal. Grading breakdown is: Assignments 30%, Individual project 40%, Class participation 25%, Journal 5%. Final grades are assigned as follows: A 90-100%, B 80-89%, C 70-79%, D 50-69%, F <50%

Accommodation for Disabilities or Temporary medical condition or injury

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance.

If you have a temporary medical condition or injury, see [Temporary Medical Conditions](#) under the Students tab on the Disability Services website.

- 12/2018

Professional Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy.

Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).

- 12/2018

Academic Integrity / Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu; 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

- 12/2018

Students should note that their work may be evaluated with a plagiarism detection service; and that this service retains a copy of the submitted work for future comparisons.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (including sexual assault, exploitation, harassment, dating or domestic violence, and stalking), discrimination, and harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#).

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

- 12/2018

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. See the [campus policy regarding religious observances](#) for full details.

- 12/2018

In this class, it is your responsibility to make such requests to your professor at the start of the course.

- 7/2018

General Course Policy on Absences

Missing a class is detrimental to your grade, this is especially so given that there are only 15 class days for a 4-credit course. Each day contributes directly both to your participation grade and any graded activity for the day, and cannot be excused or made up unless you have a documented legitimate reason (such as those noted above). Each day works out to be enough points to change your letter grade. In addition, there's an indirect impact of missing skills or other information related to take-home assignments or individual projects that is covered on any given day.

- 7/2018