
CIE 464

Sustainability in Latin America: A Case Study in Costa Rica

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COURSE DESCRIPTION:

Costa Rica is a small, Central American country with about 5 million residents known by most Americans as a top tourist, honeymoon, and retirement destination. Few know, however, that Costa Rica regularly ranks in the top 5 of the most sustainable countries in the world. Costa Ricans rely on renewable energy (~98% of electricity comes from renewable sources), are attempting to be the first carbon-neutral country, have nearly 30% of their land designated as protected forests, and have a happier population than the US. With close proximity and Spanish language, the venue is ideal for a sustainability-themed winter break study abroad experience.

CIE 464 is designed to expose students to sustainability issues that are underappreciated or not relevant in the US, including eco-tourism, monoculture (e.g., coffee, bananas, pineapples), renewable energy (e.g., hydroelectric, wind, geothermal), and societal issues (e.g., social healthcare, immigration). Student participants will be tasked with considering the full life-cycle impacts of each component of the trip. Daily group reflections and personal journals will provide the wider context of the experiences and encourage students to approach sustainability with an open mind. The program provides students an opportunity to directly engage with real-world examples of sustainability, simultaneously teaching them to be comfortable in unfamiliar (and potentially uncomfortable!) situations abroad. Themed around agriculture, energy, and eco-tourism, topics particularly unique to Costa Rica, students will participate in regionally specific tours, lectures, workshops, discussions, outdoor activities, assignments, and reflections intended to highlight sustainability in practice. By getting out of the classroom and engaging with science and engineering practitioners (displaying both good and bad examples of sustainability), the trip will foster a deeper understanding of the oft-discussed but rarely understood concept. Students are challenged to engage with the local culture and economy while considering what it truly means to be sustainable.

LEARNING OBJECTIVES:

After completing this course, a student should be able to:

- Understand differences between monoculture and polyculture, specifically as it relates to large- and small-scale sustainable agricultural practices.
- Assess and describe the advantages and disadvantages of alternative energy solutions, including wind, solar, and hydro.
- Understand the roles, both positive and negative, of eco-tourism in Costa Rican culture.
- Translate sustainability lessons learned abroad to their own country and their own lives.
- Better evaluate and appreciate their personal levels of sustainability.
- Value the importance of multicultural learning experiences.

COURSE ORGANIZATION:

To achieve these objectives, information will be delivered to students in different forms:

1. Pre-trip, faculty-led interactive workshops (~8 hours) will provide the larger context for the trip, including background information necessary to maximize the trip's impact (i.e., Costa Rican history, basic sustainability definitions, etc).
2. The students will engage with Costa Rican experts in the field that either study or work in the agriculture, energy, or eco-tourism sectors. They will focus their talks/tours on technical, cultural, and personal implications of their respective industry.
3. At each day's end, the students and instructor will reconvene for a discussion of what the students have learned over the course of the day, attempting to link the workshop/lecture/tour/experience to wider sustainability implications. Students will also record their personal reflections in journals throughout the trip.
4. A post-trip culminating writing assignment will provide the trip's final reflection piece, asking the students how this experience will alter their personal paths forward.

OUTCOME ASSESSMENT:

Your course grade will be allocated in the following way:

- **Paper (25%):** A 5 page paper is due within 3 wks of returning to the US. The paper will detail the student's personalized experience studying in Costa Rica. Throughout the trip, students will have *many* opportunities to interact with sustainability specialists. They are encouraged to (confidently!) ask questions that link their "classroom-learned" theoretical knowledge to these field observations. The papers will explain how the study abroad experience changed the student's individual perception of sustainability, and how (if at all) the student will modify their lifestyle to improve personal sustainability.
- **Participation (50%):** Pre-, during-, and post-trip workshops are mandatory and will be exclusively discussion-based. It is expected that all students treat their peers, myself, and any local representatives with respect during these discussions so that everyone can take full advantage of these opportunities. **Participation is required** – students that are not comfortable participating in group discussions are also not going to be comfortable in a study abroad experience. Finally, all participants come from different backgrounds and have different perspectives on topics. This provides a wealth of information that will most certainly improve our discussions. **Respectful** disagreements are encouraged!
- **Daily Journal (25%):** Students will keep a daily journal of their experiences. Entries should include information they are comfortable sharing with their professor. Any topic the student deems valuable to discuss can and should be written down. I expect students to take this assignment seriously and be thoughtful, but I will not specify journal content.

GRADE SCALE:

A	93-100	B+	87-90	C+	77-80	D+	67-70
A-	90-93	B	83-87	C	73-77	D	60-67
		B-	80-83	C-	70-73	F	0-60

Learning Objective	Assessment Measure
Understand differences between monoculture and polyculture, specifically as it relates to large- and small-scale sustainable agricultural practices.	Paper, Participation, Daily Journal
Assess and describe the advantages and disadvantages of alternative energy solutions, including wind, solar, and hydro.	Paper, Participation, Daily Journal
Understand the roles, both positive and negative, of eco-tourism in Costa Rican culture.	Paper, Participation, Daily Journal
Translate sustainability lessons learned abroad to their own country and their own lives.	Paper, Participation, Daily Journal
Better evaluate and appreciate their personal levels of sustainability.	Paper, Participation, Daily Journal
Value the importance of multicultural learning experiences.	Paper, Participation, Daily Journal

REQUIRED READINGS:

Prior to departing for Costa Rica, I expect student participants to have completed a series of readings that I will provide in advance. On-site readings will be provided as hard copies.

OTHER POLICIES:

Availability: I will be available to the students at all times during our visit to Costa Rica. If a student cannot reach me in person, I will be routinely available by email or cell phone.

Disability Service: All accommodations will follow UB guidelines available at: <http://policy.business.buffalo.edu/Policy%20Library/Reasonable%20Accommodation.pdf>

Cheating and Plagiarism: Cheating, plagiarism, or any other form of academic dishonesty is unacceptable and will result in an automatic grade of “F” for the course and possibly further punitive action. More information about academic integrity is available at: <https://catalog.buffalo.edu/policies/integrity.html>

Professionalism: Study abroad trips can be life-changing. I am genuinely thrilled by the opportunity to provide guidance to students throughout such an experience. However, I am not a baby-sitter, and I have absolutely no interest in being one. **Students participating in this experience will be adults, carrying themselves as professional representatives of UB throughout the entire trip.** We will have fun, we will learn lots, and we will have some truly phenomenal experiences. One student acting out, not following rules, mocking local cultures, breaking laws, or simply acting immaturely can ruin a trip for everyone. I have zero tolerance and have absolutely no problem sending students home before the trip’s scheduled end-date. I expect that you will not test this.