CURRENT ENVIRONMENTAL ISSUES IN LATIN AMERICA

GENERAL DESCRIPTION

Requirements:	None
Contact Hours:	45
Recommended Credits:	3
Average minimum out-of-class or independent learning expected per week:	12 hours

INTRODUCTION

This course will provide theoretical and practical knowledge and information about environmental and sustainable development issues and policies, illustrated with examples and case studies from Latin America, particularly Costa Rica. The course has been developed around a practical approach to the environmental green, blue, grey, and brown agendas, and selected cross-cutting issues of critical interest (energy, climate change, tourism, and economics).

OBJECTIVE(S)

By the end of this course, students will be:

- Familiar with the main local, regional, and global environmental issues our world faces today
- Capable of basic environmental research with experience acquired by means of weekly research assignments and a final paper and oral presentation in class
- Able to discuss on-going conservation science and sustainable development issues in Costa Rica, including key initiatives such as the Certification for Sustainable Tourism (CST), and the program of Payment for Environmental Services (PES) among others.
- Aware of current environmental issues by following and discussing local and international media coverage.
- Encouraged to think creatively and take individual and collective action regarding environmental issues

METHODOLOGY

Each week will include two sessions involving: Students' presentations of current environmental issues as reported by the media, a topic presentation by teacher, practical application exercises and a discussion of assigned readings, as well as regular progress review of research methods and topics selected by the students towards a final paper and presentation. The course will include a field visit of a site of interest for environmental issues, at a location to be confirmed.

COURSE CONTENTS

SESSION	SUBJECT/SPECIAL ACTIVITY
1	Introduction to course
2	Documentary: Racing extinction
3	Green Agenda: Biodiversity
4	Green Agenda: Ecosystem services
5	Field visit
6	Green Agenda: Forests
7	Green Agenda: Parks
8	Green Agenda: Agriculture
9	Green Agenda: Food security
10	Midterm
11	Blue Agenda: Oceans
12	Documentary: Mission Blue

13	Blue Agenda: Freshwater
14	Debate: Water as a Human Right and distribution issues
15	Brown Agenda: Pollution and waste management
16	Brown Agenda: 3R's and other solutions
17	Gray Agenda: Population and urban issues
18	Sustainable tourism
19	Energy
20	Climate Change
21	Documentary: Truth to Power
22	The economics of sustainability
23	Students' papers presentations
24	FINAL EXAM

RESEARCH ASSIGNMENTS

Several short essays will be submitted during the course, short presentations will be conducted by students, and a final research paper will be prepared and orally presented at the end of the course. Topics for the final paper will be defined and assigned based on students' individual interests.

NEWSPAPER READINGS AND MEDIA FOLLOW-UP

Every session, time will be devoted to discussing relevant environmental issues (local and global) as reported in the local and international media. The objective is to motivate the students

to read (preferably in Spanish) and be aware of the current issues unfolding in the country/region/world.

FIELD TRIP

The course will include a field trip to a location to be confirmed, most likely the Lankester Botanical Garden.

EVALUATION

Attendance & participation:	10%
Assignments (papers & presentation)	10%
Quizzes	15%
Mid-term	15%
Final Exam	25%
Final research paper & oral presentation	25%

COURSE READINGS – BIBLIOGRAPHY

Green Agenda – Biodiversity and ecosystem services

The nature and value of biodiversity / The diversity of life www.wri.org

Biodiversity and ecosystem services www.eoearth.org/article/Biodiversity_and_ecosystem_services

Speciation and biodiversity by E.O. Wilson www.mcz.harvard.edu/Departments/Entomology/personnel.cfm

Losses of biodiversity and their causes - www.wri.org

Animal trafficking, Nick Davies, Oliver Holmes

The Sixth Extinction – Niles Eldredge

The Strategy for biodiversity conservation www.wri.org

Green Agenda – Forests and conservation

What is a forest http://www.museum.state.il.us

The importance of the rainforest http://www.rain-tree.com/facts.htm

Tropical deforestation http://earthobservatory.nasa.gov/Features/Deforestation

Parks can change a nation – Alvaro Ugalde http://www.america.gov/st/peopleplace english/2008/July/20080715140030cmretrop0.6007654.html

The Mesoamerican Biological Corridor http://www.ecoworld.com/forests/the-mesoamerican-biological-corridor.html

Green Agenda – Agriculture and Food Security

History of agriculture www.schoolscience.rice.edu/duker/garden/gardenhis.html

Agricultural ecosystems
www.bioversityinternational.org/scientific_information/themes/agricultural_ecosystems.html

Wild relatives of crops
www.bioversityinternational.org/scientific_information/themes/crop_wild_relatives/overview.html
Green Revolution – John Perkins

The next Green Revolution – Tim Folger

What is sustainable agriculture? www.sarep.ucdavis.edu/Concept.htm

Permaculture – Key concepts www.permaculture.org/nm/index.php/site/classroom/

Blue Agenda - Oceans

Marine and coastal ecosystems http://www.epa.gov/bioiweb1

The Blue Revolution http://www.newint.org/issue234/blue.htm

Protecting the oceans makes economic sense: www.iucn.org

Prescription for a blue economy
http://cms.iucn.org/news_events/news/focus/2009_marine/all/?3134/Prescription-for-a-Blue-Economy

Blue Agenda – Fresh Water

Freshwater ecosystems http://www.epa.gov/bioiweb1/aquatic/freshwater.html

The importance and the future of wetlands http://sea-river.com

Wetlands and the Ramsar Convention http://www.birdlife.org/action/change/ramsar/index.html

Mangroves http://www.fao.org/forestry/mangrove/en/

Forests of the tide http://ngm.nationalgeographic.com/2007/02/mangroves/warne-text

Freshwater http://encyclopedia2.thefreedictionary.com/Fresh-water+ecosystem

Wars over water? http://www.infoforhealth.org/pr/m14/m14boxes.shtml#wars

Will there be enough water? http://earthtrends.wri.org/features/view_feature.php?theme=2&fid=17

Brown Agenda – Waste, pollution, and waste management

The history of waste http://environmentalchemistry.com/yogi/environmental/wastehistory.html

What is waste? http://scp.eionet.europa.eu/themes/waste

Water pollution and society http://www.umich.edu/~gs265/society/waterpollution.htm

Recycling means business http://www.ilsr.org/recycling/recyclingmeansbusiness.html

From waste to power http://www.forumforthefuture.org/greenfutures/articles/waste_to_power

Smarter bytes, slimmer footprints
http://www.forumforthefuture.org/greenfutures/articles/Smarter_bytes_slimmer_footprints

Gray Agenda – Population and urban issues

Human population dynamics
http://learner.org/courses/envsci/unit/text.php?unit=5&secNum=1

World population growth throughout history
http://learner.org/courses/envsci/unit/text.php?unit=5&secNum=4

Human population issues http://www.globalissues.org/issue/198/human-populatio

Peering into the dawn of an urban Millennium http://www.unfpa.org/swp/

Sustainable tourism

Nature Tourism - https://outdooreconomy.com/wp-content/uploads/2013/08/Tourism-New-S.-Wales_defining_nature_tourism.pdf

Ecotourism in Costa Rica - https://www.tourism-review.com/ecotourism-in-costa-rica-developing-news11257

Rovinski, Yanina. Private reserves, Parks and Ecotourism in Costa Rica – in Nature Tourism: managing for the environment, editor: Tensie Whelan, Island Press, 1991

Bâc Dorin Paul. "The Impacts Of Tourism On Society," Annals of Faculty of Economics, University of Oradea, Faculty of Economics, vol. 1(1), pages 500-506, July 2012.

GSTC - Global tourism standards - https://www.gstcouncil.org/

UNWTO – Guiding tourism's recovery - https://www.unwto.org/tourism-covid-19

Costa Rican case studies

Payment for environmental services schemes www.fonafifo.org and www.oas.org/dsd/PES/Programs.htm

Payment for environmental services highlights – the Costa Rican recipe – David Barton

Bioprospecting: market-based solutions to biopiracy
http://www.lawtechjournal.com/notes/2004/08_040809_mccelland.php

Assessing the benefits of bioprospecting in Latin America – John Eberlee

Renewable energies – The future of energy

Fossil fuels – Coal, oil and natural gas http://www.energyquest.ca.gov/story/chapter08.html

Renewable energy technologies http://www.renewableenergyworld.com/rea/tech/greenpower

Fossil fuels vs. renewable resources
http://ecology.com/features/fossilvsrenewable/fossilvsrenewable.html

Climate Change – what comes after Paris

Common questions about climate change http://www.gcrio.org/ipcc/qa/index.htm

Climate change alters ocean chemistry
http://www.sciencedaily.com/releases/2008/12/081211141832.htm

Coastal zones and sea-level rise http://www.epa.gov/climatechange/effects/coastal/index.html

The Paris Agreement http://bigpicture.unfccc.int/#content-the-paris-agreemen

Sustainable economy

Nature-based solutions https://www.iucn.org/commissions/commission-ecosystem-management/our-work/nature-based-solutions

Towards a new sustainable economy https://www.iucn.org/commissions/commission-ecosystem-management/our-work/nature-based-solutions

Natural capital http://www.gdrc.org/sustdev/concepts/26-nat-capital.htm

SPECIAL NEEDS

In case of requiring additional time for taking exams, or if experiencing any circumstance during the course of the term that would interfere with the student's ability to complete his/her work or take a test, students should let the professor know ahead of time.

CHANGES TO SYLLABUS

The student acknowledges receipt of this syllabus and the information herein by continuing to attend this course. The Instructor reserves the right to make changes to this syllabus if circumstances warrant such change, with previous approval of ICDS' Academic Director. All major changes will be provided to the student in writing.

ACADEMIC INTEGRITY

Students in this course are expected to abide by common sense, normal regulations on Academic Integrity. Violations of the Academic Integrity policy include, but are not limited to plagiarism, fabrication, cheating, and academic misconduct, including dishonest acts such as tampering with grades or taking part in obtaining or distributing any part of an administered or non-administered test/assignment. The intent to violate this policy also represents a violation of this policy.

Possible Sanctions for Violating Academic Integrity Policy

If an act of academic dishonesty is determined to have occurred, one or more of the following sanctions will be imposed, depending on the severity of a first-time offense:

- Reduction of a course grade
- An "F" for the assignment or exam
- Failure for the entire course
- Other action deemed appropriate by the faculty member
- Any of the above sanctions with the inability to withdraw.

The decision about the sanction to apply will be made jointly by the course's professor and ICDS' Academic Director, in consultation with home university on-site Director for the program, if applicable. The incident will be reported to the home university and may result in an official conduct record for the student(s).

Second violation: A second violation will result in **s**uspension or expulsion from the program, in addition to any sanction issued from the list above.

Course sessions

Please refer to class topic schedule