

Natural Science in Costa Rica

December 18, 2010-January 7th 2011

Instructors:

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Course info:

All students are required to enroll in six (6) semester credits. Three credits are mandated for course NSC 475. The independent study courses, ZOL 490 or NSC 490, provide the other three credits (an exception may be made for graduating seniors who don't need all the credits. The minimum number of credits for graduating seniors is four).

A detailed outline of readings and topics will be given out in Costa Rica. Topics covered will include tropical ecology, evolution, conservation, geological history, evolution of diversity gradients, amphibian declines, land use management, sustainable agriculture, organismal biology, watershed dynamics, marine biology, restoration ecology, etc.

Course readings:

Handouts will be given out in Costa Rica to accompany lectures. Additionally the course has two texts:

Breakfast of Biodiversity: The Truth About Rainforest Destruction by J. Vandermeer and I. Perfecto

-Available on Amazon for ~\$11

A Neotropical Companion: An Introduction to the Animals, Plants, & Ecosystems of the New World Tropics. Kricher, John. 1997. Princeton University Press, New Jersey.

-Available on Amazon.com for ~\$20

Grades:

Your grade will be determined based on the following breakdown for assignments. Note graduating seniors enrolling in 4 credits do not have to write the research paper.

Students taking 6 credits:

Exam(s)	30%
Quizzes, Labs, Homework, etc	30%
Participation	20%
Research project	20%

Students taking 4 credits:

Exam(s)	50%
Quizzes, Labs Homework, etc	30%
Participation	20%

Exam(s): More information regarding exam number and format will be given throughout the course.

Quizzes, Labs, Homework, etc.: There will be regular quizzes, labs and homework assignments given during the course. Quizzes can be given at any time and will often be unannounced. All homework, labs, and quizzes will count for 30% of the total course grade.

Participation: Your dedicated participation is essential for ensuring a successful study abroad experience. Each day you will be given participation points reflecting your participation and attitude during that day. You are expected to be an active learner, work well in groups, be punctual, and maintain a positive attitude throughout the entire course. Participation points are based entirely on the discretion of the instructors.

Research paper: Students will be writing a research paper that will be due on Friday, February 4th, 2011. Specific information on the research paper is detailed below.

Final grades will be determined on the following grading scale. There will not be a curve applied to the final grade.

4.0	90-100%	2.0	70-74%
3.5	85-89%	1.5	65-69%
3.0	80-84%	1.0	60-64%
2.5	75-79%	0.0	<60%

Note: Details of grades and assignments can be altered by the instructors if deemed suitable. Students will be notified of any changes that may arise.

Academic Honesty:

This course adheres to the policies on academic honesty as specified in the General Student Regulations 1.0, Protection of Scholarship and Grades, and in the all-University Policy of Integrity of Scholarship and Grades, which are included in the Spartan Life: Student Handbook and Resource Guide. Students who plagiarize will receive a 0.0 on the exam.

Attendance: You are expected to attend all lectures, hikes and other activities while in Costa Rica. Unexcused absences can and will affect your grade. Any missed assignments will be counted as zero, unless there are extenuating circumstances that are accepted by the instructors as per the guidelines discussed on this syllabus under make-ups. Missing the final exam will be counted as a zero and will result in a failing grade being issued for the course. Incompletes will be issued at the discretion of the instructors as per the

University guidelines and policies. If you are feeling physically unable to do this you must discuss this with your instructors.

Make-up quiz/test/assignment policy: In general you cannot make-up missed assignments. The point of a course is for you to experience the course material under the direction and guidance of your instructors. If you are not participating in the course activities, you are not gaining anything from those experiences. Also, many of the materials covered in this course are only presented during lectures, field exercises, and discussions held on site. If there is a sufficient reason for a make-up to be given, it will be at the discretion of the instructor and may be of a different format than the original. If you have to miss a class or exam, you need to make arrangements to make-up the work at the earliest possible date.

Research project:

Students are required to write a research paper regarding some aspect of environmental science in Costa Rica. We will be discussing possible paper topics throughout the course. The paper must meet the following:

- 8 pages minimum, 10 pages maximum double spaced
- Size 12 font, times new roman, regular page margins
- A minimum of 10 references from primary literature
- Figures and table are optional and do not count towards length specifications
- Reference citations
- Topic must be approved by instructors prior to the end of the trip
- You must prepare a detailed outline on Monday, January 21st 2011

One goal of the course is for you to hone your writing skills. Towards this goal you are required to turn in a rough draft of your paper for comments. The paper will be graded according to the following:

	<u>Points</u>
Introduction	10
Review of topic and literature	20
Conclusion	10
References	10
Quality of writing, grammar, sentence structure, etc	20
Detailed outline	<u>20</u>
	100 total points

Introduction: Briefly summarize your topic in an introduction. Be sure to define the nature of your topic. The introduction should be engaging and set the stage for the rest of the paper. Why is your topic important? If appropriate you may include a thesis statement regarding your topic.

Review of topic and literature: In this section you will provide an in depth review of your topic. This section is the meat of your paper and is flexible depending on your topic and where you want to take it. It is recommended to have a few key points that you want to

drive home. Creating an outline will likely be a useful tool to designing your paper. This section should be in depth and information should be presented in a logical manner.

Conclusion: In the conclusion briefly summarize your paper and highlight the key points you want to drive home. Include some concluding remarks that encompass the essence of your topic.

References: It is critical that you follow instructions for this section precisely! The first step is to gather all your sources (reference) material that will be used in the text of your paper. Once this is accomplished, arrange all the authors, editors, etc. of this reference material in alphabetical order and number sequentially. This will constitute your bibliography. If you use an idea from a reference, quotes are not needed, but again you place the number of the reference within parentheses before the last period in the paragraph involved. See the examples below:

Man--never before in history of the earth has a single species had such an impact on its environment. His roadways lace the most remote wildernesses; his livestock overrun and devastate the grasslands; his gun defies nature's laws of predation and seeks out the proudest head as trophy. He is a creature of many distinctions: never has a single species by itself caused the total extinction of another. For a being of such immense power, man accepts very little responsibility toward his fellow beasts (3).

1. Andrews, Roy Chapman, Nature's Ways: How Nature Takes Care of Its Own, New York, Crown Publishers, 1951.
2. Biesanz, Richard, The Costa Ricans, Toronto, Ontario, University of Toronto Press, 1982.
3. Bourliere, Francois (translated from French by H.M. Parshley), The Natural History of Mammals, New York, Alfred A. Knopf, 1964.
4. Cloudsley-Thompson, J.L., Animal Conflict and Adaptations, London, G.T. Foulis & Co., Ltd., 1965.
5. Curtis, Helena, Biology, 2nd ed., New York, Worth Publishers, Inc. 1975.
6. Janzen, Daniel, Natural History of Costa Rica, San Jose Press, 1983

Quality of writing, sentence structure, etc: You should review and rework your writing multiple times. The final version should be spic and span--clear and concise.

Presentations: There will be a session on Monday February 7th where students will give powerpoint presentations on their projects. The powerpoints should be 10 minutes long with 2 minutes for questions. The presentations should summarize your research project and be presented in a clear and concise manner and represent the material accurately.

Research paper timeline:

Topic selection	Due before we leave Costa Rica
Outline	Due on or before Monday, January 21st 2011
Final draft	Due on or before Friday, February 4, 2011
Presentations	Monday February 7th, 2011 time tba

General Information:

A. Personal items

1. You must have your passport.
2. You should have enough money with you to purchase food for seven days during hotel stays. Other days food will be provided at the field stations. There will also be other things you will want to buy or do, so bring enough money to cover these. Estimated \$10 to \$15 per day.

B. Physical Conditioning

Get yourself in top physical condition - the considerable hiking that we will be doing during the itinerary demands this. A consistent exercise program through the rest of this term is strongly advised

Contact information:

Contact information will be given out prior to the trip for the locations that we will stay at while in Costa Rica.

Emergency contact information:

In the case of an emergency your family should first contact the Emergency Assistance Line at **517-353-3784**

During the trip we will have 2 cell phones with us. The Emergency Assistance Line will have those numbers and can call us directly.

Calling Costa Rica from the United States explained:

- * 011 - US exit code; must be dialed first for all international calls made from the USA
- * 506 - country code for Costa Rica
- * phone number - 8 digits
- * US to Costa Rica landlines international dialing format: 011 + 506 + 2??? ????