



**Fundamentals of Tropical Biology**  
(*Duke University - BIO 280A*)

**Class Meeting**

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**Faculty**

J. Mauricio Garcia-C., Msc.

Email: [mauricio.garcia@tropicalstudies.org](mailto:mauricio.garcia@tropicalstudies.org)

Guest lecturers and local stakeholders also participate in the course.

**Statement of Accessibility**

This class represents an environment that is open and welcoming to all students. If you believe you may need accommodations during this class that may not traditionally be available, please contact any of the instructors within the first week of the course to plan a way to meet these needs within the potential logistical restrictions posed by a field course. Please communicate with us openly and recognize that accommodations are collaborative efforts between students and faculty.

**Course Description**

This course integrates classroom and field instruction to introduce students to the fundamental principles of tropical biology and the natural history of local plants and animals. The ecological complexity of the tropics, the patterns of species diversity and the types of species interactions that characterize these systems are discussed in detail. Classroom instruction includes lectures given by resident and visiting professors, as well as discussions of assigned readings and selections from the primary literature.

Fieldwork is an important component of the course. During the semester, the course visits all three OTS biological field stations as well as additional sites in Monteverde, Bocas del Toro, Mangrove forest, and Cerro de la Muerte area. Students are introduced to a great variety of tropical ecosystems (e.g., montane cloud forest, seasonally dry forest, lowland wet forest, wetlands, mangroves, and high elevation páramo). Field orientation at each site includes the identification and natural history of important plant and animal species. Orientation activities also serve to stimulate questions that students may address in subsequent independent research projects. Developing the skill of keeping good field notes is important in order to have an easily accessible record of what students learn or observe at each site.

**Specific Goals**

By the end of this course, students will be able to:

- Identify and understand key processes influencing biodiversity and ecosystem dynamics in tropical habitats.
- Distinguish between diverse tropical ecosystems and identify the key characteristics of lowland wet forest, dry forest, major wetland ecosystems, montane forest, and páramo.

- Understand the basic natural history of important plant and animal taxa and identify important plant and animal groups associated with each of the major ecosystems visited.
- Discuss conceptual issues underlying current research programs in tropical environments.

### Course Evaluation

	<u>% Final Grade</u>
Midterm Exam	25
Final Exam	28
Laboratory Assignments	
Plant Keys (3 sites)	12
Insect IDs (3 sites)	12
Biodiversity Exercise	3
Field Notebooks (4 sites)	10
Participation	10

### *Exams*

There will be two exams during the semester. Exams will cover material presented in class, in readings, and during laboratories, activities, and field trips. Exams questions may take a number of formats, but are typically short-answer questions. The final exam is not cumulative, but may require that you retain information and understand concepts presented in the first part of the semester. Exams are intended to encourage you to review the information presented and demonstrate to the instructors your understanding of and ability to synthesize course material. We will make every effort to grade exams within a reasonable time frame. After exams are handed back to students will be advised of the time period during which you may review your answers and ask questions. This time frame is typically 2 weeks. All appeals regarding grading decisions should be made within this time frame.

### *Laboratory Assignments*

The course includes taxonomy exercises to give students a practical understanding of tropical diversity across different ecosystems, practice in observing differences in plants and insects, and skills in collecting. The exercises also give students hands-on practice in applying the concepts of species identifications. At each of 3 sites students will select 5 plants in different families and construct a dichotomous key for their 5 plants using accepted morphological features. Insect identification exercises will consist of students handing in identified insects across a broad range of orders and families. The insect identification can be accomplished by any means available to you, except having another person identify it for you. You are on your honor to do your own collecting and identifications. Euthanizing insects is not necessary for completing this assignment.

### *Biodiversity Exercise*

This exercise will be explained in more detail after the lecture with which it is associated. This is a written exercise designed to help you synthesize concepts relating to how high species diversity can be maintained in tropical communities. The exercise also serves to give you feedback on your understanding of these concepts prior to exam time.

### *Field Notebooks*

Most field researchers and naturalists find keeping a field notebook to be a useful tool for recording interesting observations which they can refer back to for later comparisons or research ideas. To explore the usefulness of this tool, students are required to keep a field notebook throughout the semester. At a minimum, students should include an entry of a half hour observation at four sites. All entries should include date and location and anything else that may be considered important such as climate, time, temperature etc. Observations can include drawings and species lists. Additional information that students may want to include in their field notebooks are observations from field trips, orientation walks, plant taxonomy exercises, etc. Field notebooks will be collected after field station visits during the course and

graded based on completeness, neatness, and effort. A more detailed handout on field notebook requirements will be distributed once classes begin.

### *Participation*

Participation includes attendance of lectures, workshops and field trips, completion of assignments, positive contributions to discussions and lectures, listening to others, and demonstration of academic initiative and enthusiasm in the field as well as in the classroom.

### **Grading**

<b>Course grade (%)</b>	<b>Letter grade</b>
97-100	A+
93-96.99	A
90-92.99	A-
87-89.99	B+
83-86.99	B
80-82.99	B-
77-79.99	C+
73-76.99	C

### **Readings/Textbooks**

Primary literature and review articles are also assigned throughout the course. A schedule of reading assignments is provided at the beginning of the semester. Readings take two forms: those that are intended to reinforce class material by presenting the subject in a different framework, and those that are intended to complement and add to material presented in class by expanding on a particular topic.

### **Statement of Expectations for Student Conduct**

We expect you to conduct yourself in a professional, honest, and ethical manner and adhere to Duke University's academic policies. As such you will be held to the highest standards regarding academic integrity. Academic dishonesty includes: lying (communicating untruths or misrepresentations); cheating (using unauthorized materials, information, or study aids); fabrication (falsifying or inventing information); assisting (helping another commit an act of academic dishonesty); tampering (altering or interfering with evaluation instruments and documents); plagiarism (representing the words or ideas of another person as one's own); and stealing (appropriating the property of another without permission). For additional information about academic dishonesty at Duke University please go to: <https://studentaffairs.duke.edu/conduct/z-policies/academic-dishonesty>

### **Additional Policies & Procedures**

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### American with Disabilities Act

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### Statement on Plagiarism

Plagiarism is defined as taking the words or ideas of another person and using them without citation as though they were your own. As such, acts of plagiarism include using song lyrics, words from an interview, words or ideas from a conversation or in-class discussion, words from a lecture by a professor, jokes from a comedian, or lines from a movie or dramatic play, in addition to more traditional sources such as articles from peer-reviewed journals, news sources, books, or magazines, in a scholarly work of your own without crediting their place or person of origin. In this class, students will be expected to properly cite all sources from which words, information, and ideas in their papers come, including quotation marks for precise wording and in-text citations for all ideas, as well as a full bibliography at the end of the paper. As we will be using APA style, please consult the APA website, <http://www.apastyle.org/>, for specific instructions on proper citation.

According to the Duke University policy on plagiarism, students found to have plagiarized in classwork or written assignments will be given a grade of “F” for the paper on which they have been found to have plagiarized and may be subject to an official investigation of their academic honesty by the University. This investigation, even if the student is found to have been innocent, will be **permanently documented** on the student’s academic transcript. If you are uncertain about the citation criteria for an idea in your paper, please see the instructor and ask before submitting. Your honesty is greatly appreciated, and will serve you in all of life! For more on University policies regarding plagiarism please see the handbook.

### Class Attendance & Authorized/Religious Absences

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Also, please mind your food and drinks. Avoid creating disruptions related to eating/drinking during class or other activities. Avoid spills, crumbs, etc. and clean up after yourself immediately. Remove any trash you or others create.

Finally, an essential element to successful class meetings is your preparation. Please read and complete assignments on time, and be prepared for class participation and discussion. We will do everything in our power to provide you with a positive and inclusive learning environment and will guide and assist you in your learning experience. But, ultimately, your education is your responsibility. Please take this responsibility seriously.

### Schedule Overview

Week	Site	Topics and Activities
1-2	Las Cruces	Field Notebooks Plant and Insect diversity Forest Structure Forest Classification Costa Rica Climate and Ecosystem Diversity Intro to Plant-Animal Interactions Tropical soils and nutrient cycling Tropical Herbivory
3	Cuericí	High Altitude Ecosystems Oak Forest Ecology and adaptations Páramo Ecology and adaptations Biodiversity I: patterns and origins
4-5-6	Palo Verde	Plant and Insect Diversity and Ecology Dry Forest Ecology Mangrove Ecology Gomphothere Seed Dispersal Invited faculty lectures TBA
7-8-9	Homestay	Spanish Language and Culture
10	Midterm Break	
11	Monteverde	Cloud Forest Plant Diversity and Ecology Gap Dynamics and Seed Banks Plant-Animal Interactions: Pollination Plant-Animal Interactions: Seed Dispersal Amphibian Taxonomy and Ecology Frog Acoustic Communication in diverse contexts
12	Bocas del Toro, Panama	Reef Ecology Tide pool Ecology Animal Behavior Biodiversity II: measuring, describing, community species packing hypotheses
13-14-15	La Selva	Plant and Insect Diversity and Ecology Wet Forest Ecology Long term ecological research Invited faculty lectures TBA



**Field Research in Tropical Biology**  
(*Duke University BIO - 281LA*)

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**Faculty**

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**Course Description**

This course introduces you to research design, field methods, and basic data analysis in a tropical context. Hypothesis testing and statistical analysis, including orientation to basic software packages, are emphasized in the course. Students participate in faculty-guided field problems which require working together in small groups. Students also design, implement, and analyze their own field projects. The course takes an iterative approach to teaching research design. Rather than working on one or two long projects, students participate in multiple shorter projects. While learning to ask and answer scientific questions, students also learn about the ecology of the organisms they work with.

In faculty-led projects, resident or visiting faculty select the questions and guide the students through the process of identifying hypotheses, designing field experiments, and interpreting data. Projects are designed to familiarize students with interesting questions and organisms, as well as to give students experience with a diversity of research approaches. Some projects are long-term and on-going projects while others may be one-time investigations of tropical phenomena in the area of expertise of the invited faculty. These group projects also give students an opportunity to learn about professional collaboration, and to work together gathering and analyzing data. A

small subset of students will be responsible for writing up one faculty led project during the semester. These students are expected to work closely with the leading faculty in project design, implementation, interpretation, and the presentation of results. Faculty led projects are presented orally in the format of a scientific presentation and also as a written report. Students are assigned to their FLP groups by the course faculty at the beginning of the semester.

During the semester, students complete 2 independent research projects. Students work either individually or in groups of up to 4 people to choose a question, develop hypotheses and design and implement the study. Like the faculty-led projects, the independent project is presented both orally and as a written scientific paper. For both independent projects, faculty provides close mentoring throughout the process of experimental design, implementation, and analysis. Students present research proposals to faculty for approval and then meet regularly with an assigned faculty mentor to give updates and seek advice. Faculty read first drafts of the resulting papers and students make revisions for the final write-up.

Students also participate in discussions of the ethical issues that often surround scientific research in general, and field research in the tropics in particular.

**Specific Goals:**

- Learn the fundamental concepts of the scientific method.
- Practice experimental design and implementation using basic research tools and techniques.
- Learning to use and interpret basic statistical tests.
- Practice making inferences from observations, as well as synthesizing and integrating information.
- Practice working in groups, including coordinating activities, dividing responsibilities and integrating disparate perspectives.
- Become committed to accurate and organized work.
- Learn to write scientific papers and give scientific presentations.
- Explore ethical issues that revolve around the regulation of, and expectations of, research at national and international levels.

**Course Evaluation**

	<u>% Final Grade</u>
Statistics Exercises (Las Cruces, Cuerici)	5
Faculty-Led Projects (La Selva, Bocas del Toro, Palo Verde)	
- Participation	4
- Scientific Paper (written as group paper)	6
- Oral presentation	2
Independent Project I (La Selva)	
- Participation	5
- Draft Scientific Paper	5
- Final Scientific Paper	15
- Oral Presentation	5
Independent Project II (Palo Verde)	
- Participation	5
- Draft Scientific Paper	10
- Final Scientific Paper	20
- Oral Presentation	5
Poster and Poster Session	5

## Ethics Discussions

- Presentation of your topic and leading your discussion 5
- Participation in all discussions 3

*Statistics exercises-* Classroom or homework exercises help students familiarize themselves with basic statistical tests, and how one runs them using JMP statistical software. Topics covered include, but are not limited to probability, Chi-Squared tests, T-tests, ANOVA, Regression, Correlation, Multivariate Analyses, and Non-Parametric analyses.

*Project participation-* Students are expected to participate fully in all aspects of independent projects and faculty led projects. This includes spending appropriate amounts of time in the field collecting data, and putting in honest effort in group situations.

*Written reports-* Students work in a group to write up one faculty led project during the semester. For independent projects, each student is required to write an individual paper, even if the project was a collaborative effort. Papers are in scientific paper format. For independent projects, papers are submitted first as a draft which is corrected and returned. Students make changes to the draft according to the feedback on the paper, and hand in a final version.

*Oral presentation-* Oral reports follow the format of talks given at scientific meetings and should be a synopsis of the written report. Presentations are usually done in Power Point, which means they can include graphs and pictures. Presentations should be fun, but should not distract the audience with too many special effects or jokes.

*Poster Session-* For one of the independent projects (La Selva) students will present their results to the public in a poster session. The objective is to communicate science to a general audience and the local community. Typically this includes La Selva staff, La Selva researchers, and the students of the Ecology Group of the local branch of the Universidad Estatal a Distancia (UNED).

*Ethics seminar-* The ethics seminar is designed to introduce students to some of the philosophical, political and practical issues that surround scientific research. During the first weeks of the program, students choose a topic (such as “biopiracy”, “scientists as policy advocates” etc.) provided by the faculty. Students then work in small groups using the internet to find a few case studies relevant to the topic, and to develop a short presentation (15 minutes) that summarizes the case studies and then lead the class in a discussion of the topic. Total presentation and discussion time = 1 hour.

## Grading

Course grade (%)	Letter grade
97-100	A+
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90-92.99	A-
87-89.99	B+
83-86.99	B
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77-79.99	C+
73-76.99	C



**Textbook:**

No text required; research articles and handouts are assigned where appropriate.

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**Schedule Overview**

<b>Week</b>	<b>Site</b>	<b>Topics and Activities</b>
1-2	Las Cruces	Risk management in the Field Introduction to Hypothesis testing Selection of ethics topics Descriptive statistics Non-parametric statistics Ethics discussion 1
3	Cuerici	Parametric & multivariate statistics Faculty research talk: Erika

4-5-6	Palo Verde	Faculty-led projects 1 & 2 Invited Faculty research talks Independent research project 1 Ethics discussion 2
7-8-9	Spanish/Homestay	
10	Fall Break	
11	Monteverde	Faculty research talk: Mauricio Invited Faculty research talk: Pablo Riba Ethics discussion 3
12	Bocas del Toro, Panama	Faculty-led project 3
13-14-15	La Selva	Faculty-led projects 4 & 5 Invited Faculty research talks Independent research project 2 Ethics discussion 4 Communicating Science to communities: poster session and forest walk



**Environmental Science and Policy in the Tropics**  
(*Duke University - ENV 282A*)

**Class Meeting**

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**Faculty**

J. Mauricio Garcia-C., Msc.

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Guest lecturers and local stakeholders also participate in the course.

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**Course Description**

This course encourages students to evaluate the conservation and management of natural resources using tools and perspectives relevant to both the natural and social sciences. Students are introduced to issues and problems in environmental science and conservation biology under three main themes: 1) Social and Political History of Costa Rica, 2) Tropical Ecosystem Management, and 3) The Global Environment.

Instruction consists of field trips, lectures, discussions, presentations, and writing assignments. In addition, there will be background readings from textbooks, research papers, and review articles. Field trips highlight major conceptual themes as well as practical challenges faced by Costa Rica and other Neotropical countries. Examples include visits to banana and coffee plantations, managed wetlands, forest fragments, and private farms and reserves. Formal lectures and writing assignments are often linked to field activities and orientation walks.

**Specific Goals**

- Understand the historical, social and economic context of conservation planning and implementation in Costa Rica.
- Study the practical issues in the management of specific types of ecosystems in Costa Rica (e.g., tropical wet and dry forests, and montane forests).

- Understand the relationship between different agro-ecosystem models and the conservation of biodiversity in the tropics.
- Be able to critically discuss how the conservation and management of tropical ecosystems are interconnected to the changing global environment.

Synthesis of Goals:

- Develop an understanding of the interdisciplinary nature of management and conservation in tropical and global ecosystems.
- Develop a sense of personal global stewardship that will continue beyond the course.

**Course Evaluation**

	<u>% Final Grade</u>
Midterm	25
Final	30
Written assignments	20
Journal/Blog (4 submissions)	10
Ecological Footprint assignment	5
Participation and Discussions	10

*Exams*

There will be two exams during the semester. Exams will cover material presented in class, in readings, and during laboratories, activities, and field trips. Exams questions may take a number of formats, but are typically short-answer questions. The final exam is not cumulative, but may require that you retain information and understand concepts presented in the first part of the semester. Exams are intended to encourage you to review the information presented and demonstrate to the instructors your understanding of and ability to synthesize course material. We will make every effort to grade exams within a reasonable time frame. After exams are handed back to students will be advised of the time period during which you may review your answers and ask questions. This time frame is typically 2 weeks. All appeals regarding grading decisions should be made within this time frame.

*Written Assignments*

Written assignments are based on topics that have been presented during the course and need to be expanded individually or in groups. They will be assigned and graded by the professor in charge of the activity. Some times they will require doing research in the library or on the web, or interviewing people. Topics include but are not limited to fragmentation biology, restoration ecology, pollination, mangroves, community perceptions of conservation issues, banana agro-ecosystems and multinational corporations.

*Journal/Blog*

Communicating scientific experiences and findings to a non-scientist audience is increasingly important. The Tropical Biology blog assignment is designed to communicate research, ecology and conservation issues to the general public, and to encourage you to share your experiences and research findings in a fun and non-traditional way. Through reflective journaling and web publishing students hopefully find themselves thinking about course content in ways they might not have otherwise.

During the semester, students should prepare and post four blogs: two from before Semester Break, and two after. The format is should be at least 1 page Times New Roman 12 pt font, 1 inch margins, 1.5 line spacing.

### *Ecological Footprint assignment*

The objective of this assignment is to have each student estimate their ecological footprint. Students will then use the information from these calculations to identify ways in which they could potentially reduce their footprint by observing different lifestyle choice between students US lifestyle and that of their Costa Rican homestay family. This is an individual assignment and students need to find information on the web to make the calculations. Students will need to write a short report and be prepared to discuss this with the class.

### *Participation*

Participation includes attendance of lectures, workshops and field trips, completion of assignments, positive contributions to discussions and lectures, listening to others, and demonstration of academic initiative and enthusiasm in the field as well as in the classroom.

### **Grading**

<b>Course grade (%)</b>	<b>Letter grade</b>
97-100	A+
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77-79.99	C+
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### **Readings/Textbooks**

Vandermeer J., and I. Perfecto. 2005. *Breakfast of Biodiversity: The political ecology of rain forest destruction*. Food First, 2<sup>nd</sup> ed.

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Academic dishonesty (i.e. plagiarism, cheating) will not be tolerated. Any person suspected of academic dishonesty will be subject to the policies and procedures set forth by Duke University as outlined in the Undergraduate Catalog.

#### Statement on Plagiarism

Plagiarism is defined as taking the words or ideas of another person and using them without citation as though they were your own. As such, acts of plagiarism include using song lyrics, words from an interview, words or ideas from a conversation or in-class discussion, words from a lecture by a professor, jokes from a comedian, or lines from a movie or dramatic play, in addition to more traditional sources such as articles from peer-reviewed journals, news sources, books, or magazines, in a scholarly work of your own without crediting their place or person of origin. In this class, students will be expected to properly cite all sources from which words, information, and ideas in their papers come, including quotation marks for precise wording and in-text citations for all ideas, as well as a full bibliography at the end of the paper. As we will be using APA style, please consult the APA website, <http://www.apastyle.org/>, for specific instructions on proper citation.

According to the Duke University policy on plagiarism, students found to have plagiarized in classwork or written assignments will be given a grade of “F” for the paper on which they have been found to have plagiarized and may be subject to an official investigation of their academic honesty by the University. This investigation, even if the student is found to have been innocent, will be **permanently documented** on the student’s academic transcript. If you are uncertain about the citation criteria for an idea in your paper, please see the instructor and ask before submitting. Your honesty is greatly appreciated, and will serve you in all of life! For more on University policies regarding plagiarism please see the handbook.

#### Class Attendance & Authorized/Religious Absences

Regular and punctual attendance is expected. Attendance begins on the first day of class. Attendance is taken every class period. Class attendance is essential for participation, performance, and intellectual progress. Attendance is generally an indication of how serious of a student one is, and will most likely account for the success, or lack of success, of a student. In this class, attendance is a symbol of participation, which represents part of your grade. Notes taken during class will enhance that physical presence by allowing you to capture essential information, meaning, and details of the course. University authorized absences and religious absences are provided in accordance with Duke University policy and state law.

### Acting Responsibly

Any acts of misconduct as defined by the Student Code of Conduct, which is available from the Duke University Dean of Students Office, will be referred to the University and may be subject to the university Code of Conduct and Discipline.

Please remain respectful of others' time. Turn off cell phones, let others speak, and be on time to class, field trips, and activities. Tardiness is inconsiderate and unacceptable. Please let us know if you will not be able to make it to class. It is your responsibility to obtain notes from a classmate for any missed time.

Also, please mind your food and drinks. Avoid creating disruptions related to eating/drinking during class or other activities. Avoid spills, crumbs, etc. and clean up after yourself immediately. Remove any trash you or others create.

Finally, an essential element to successful class meetings is your preparation. Please read and complete assignments on time, and be prepared for class participation and discussion. We will do everything in our power to provide you with a positive and inclusive learning environment and will guide and assist you in your learning experience. But, ultimately, your education is your responsibility. Please take this responsibility seriously.

### **Schedule Overview**

<b>Week</b>	<b>Site</b>	<b>Topics Covered</b>
<b>1-2</b>	Las Cruces	<ul style="list-style-type: none"><li>- History of Costa Rica</li><li>- Pasture Restoration Ecology</li><li>- Forest Fragment Ecology</li><li>- Coffee Agro-ecosystems</li><li>- Butterfly farming as a Cottage Industry</li><li>- Invasive Species</li></ul>
<b>3</b>	Cuericí	<ul style="list-style-type: none"><li>- National Parks and the System of Conservation Areas</li><li>- Marketing the Environment and Funding Conservation</li><li>- Trout farming as sustainable development</li><li>- Government vs local control of conservation</li><li>- Sustainability of Oak Forest small-scale or large scale extraction</li></ul>
<b>4-5-6</b>	Palo Verde	<ul style="list-style-type: none"><li>- Dry Forest Conservation and Management</li><li>- Wetland Restoration and Management</li><li>- Sugar Cane and Rice Agriculture</li><li>- Human impact in Dry Forest, Pesticide Use in Agroecosystems</li><li>- Mangrove Conservation</li></ul>
<b>7-8-9</b>	Spanish	<ul style="list-style-type: none"><li>- Ecological Footprint</li><li>- Conservation problems and solutions homework</li></ul>
<b>10</b>	Midterm Break	
<b>11</b>	Monteverde	<ul style="list-style-type: none"><li>- History of ACM and San Gerardo</li><li>- Causes of Tropical Destruction</li><li>- Tourism in Monteverde</li><li>- Bird Conservation in Montane Habitats</li><li>- Neotropical Frog Decline</li></ul>



<b>12</b>	Bocas del Toro, Panama	<ul style="list-style-type: none"> <li>- Human history of Bocas del Toro</li> <li>- Island challenges and development</li> <li>- Reef Restoration</li> </ul>
<b>13-14-15</b>	La Selva	<ul style="list-style-type: none"> <li>- Banana Agriculture &amp; Multinationals</li> <li>- Long Term Ecological Research</li> <li>- Climate Change and Tropical Ecosystems</li> </ul>



**Duke/OTS Undergraduate Semester Abroad Program**

**Culture and Language in Costa Rica**

Duke University SP92A Spring 2017

This course is intended for students that have a basic to intermediate background of the Spanish language. The chief goals are to expand vocabulary and conversational skills, strengthen grammar, and introduce key social, cultural and environmental issues in Costa Rica. Students discuss specific topics of the Costa Rican society and learn about the different forms of the Latin American and Costa Rican culture. The course, taught entirely in Spanish, introduces new vocabulary and emphasizes grammatical rules within the context of specific themes chosen to enhance students' familiarity of daily customs or cultural institution that shape daily life. Classroom discussions supplemented by listening, writing and reading exercises are the main instructional vehicles used to increase language skills. Activities like cooking, music and dance, and lectures on Costa Rican history and sociology are also an integral feature of the course.

During the mid-semester period, students will live with Costa Rican families in San José and they will be taking 5 hours per day of intensive Spanish, during 12 days. During this period, students will have ample opportunity to improve Spanish skills and gain insights into contemporary Costa Rica. At the end of the program students would have received a total of 60 hours of Spanish instruction.

After this program, students are expected to have gained sufficient fluency to express themselves in different real life situations. Also, they will be able to make written reports and to apply their listening and comprehension skills when they take notes in Spanish during lectures and field assignments.

**Cultural activities:** Activities such as cooking, dance, and conversation classes are also an integral feature of the course, at least four additional hours per week. Throughout the semester cultural activities will be organized for the students such as typical music, folkloric dance, visits to museums, and handicraft fairs.

**Grades** are based on written exams, oral presentations, compositions and class participation as follows:

Final exam (1)	25%
Class participation	30%
Homework (5)	25%
Oral presentation (1)	10%
Composition (1)	10%

During classes, each day, the instructor will evaluate reading and auditory skills based on specific activities. At least, one auditory and audiovisual exercise will be done each week, as well a reading comprehension practice. Students will be expected to fill in missing words, organize sentences and verify information based on specific guides provided by the instructor.

**Instructors:** Classes are taught by CRLA teaching staff, accredited with the Costa Rican Department of Education holding university degrees in Spanish, Education, Linguistics or Philology, from either the University of Costa Rica or the Universidad Nacional (the two most prestigious universities in the country).

**Textbook:**

For beginner students: *Todo bien?* 2009

For intermediate students: De la Fuente, Martin & Sans.2007.*Gente*.Pearson, Prentice Hall.

For advanced students: Dominicus, Reynolds. 2007. *Repase y escriba*. Wiley and Sons.

Selected material based on social, cultural and environmental issues in Costa Rica.  
Current event articles.

**Student Evaluation:**

Class participation and homework: Attendance is obligatory. Students will be graded on the basis of their active, dynamic and creative participation in all classroom activities (reviews, presentations, oral exercises, reading) Students will have homework every day. It will include grammar exercises, bibliographic research, newspaper readings and short interviews.

Oral presentations: they will be evaluated according depth, vocabulary, lack of repetition, grammar structure, noun and verb agreement, pronunciation, intonation and fluency.

Compositions: In the compositions, students will be expected to demonstrate knowledge acquired, including grammatical structures and vocabulary. Students will be allowed to choose composition topics from a list provided by the professor.

Final exam: At the end of the course, students will complete a final exam over all of the material learned during the intensive program. It will include grammar, reading, auditory, writing and oral exercises and will last approximately 2 and a half hours.

In order to ensure that each student is improving his/her language skills, is having the opportunity to actively participate in the class, and is taking full advantage of the program, students will be divided into groups based on their Spanish proficiency. Therefore, the course has three levels: beginner, intermediate and advanced

**Beginner's level:** has been designed to provide an introduction to elementary Spanish. The primary objective of this course is to offer students the opportunity to acquire communication skills in what we call "survival Spanish." Functions include: asking/giving directions, using appropriate greetings, introductions, and courtesy expressions as well as being able to communicate in different social situations such as visiting a bank, restaurant, or other public places. Furthermore students should be able to give their personal information, and talk about personal preferences and activities in growing details. In this course students will practice grammatical rules within the context of specific themes chosen to enhance students' familiarity of daily customs.

**Grammar content:**

- Verbos ser y llamarse
- Género y número
- Pronombres personales
- El alfabeto
- Los demostrativos
- Los números del 1 al 20
- Los intereses personales
- Adjetivos calificativos.
- Palabras útiles para la clase
- Adverbios de cantidad.

- El presente regular.
- Adjetivos posesivos.
- La edad, estados civiles y profesiones.
- La nacionalidad y la procedencia.
- los números de 20 a 100.
- Los estudios
- La familia.
- las aficiones
- Hay, estar y tener. (es necesario utilizar una práctica extra , ya que la que aparece en el libro no resulta la más apropiada)
- Y, ni, no, también y tampoco
- Verbos irregulares: querer y preferir
- Verbos gustar
- Los medios de transporte
- La ciudad
- Turismo y vacaciones
- Las estaciones y los meses del año
- Adjetivos calificativos
- Actividades en las vacaciones
- Números de 100 a 1000
- Tener que
- Necesitar
- ¿Cuánto cuesta?
- Pronombres de OD y OI
- Las tiendas y las compras
- Los regalos y productos personales
- Productos del hogar y electrodomésticos
- La ropa y los accesorios
- 38-Los colores
- 39-Las fiestas y las celebraciones
- Presente de indicativo: regular e irregular: cambios e>ie, e>i, o>ue, u>ue, verbos irregulares en la primera persona singular hacer, poner, decir, saber.
- Verbos reflexivos
- Expresiones para indicar frecuencia: siempre, de vez en cuando, casi siempre...
- La cuantificación: muy, mucho, demasiado
- Expresiones para dar consejos: tener que, haber que, es necesario/bueno /importante / conveniente
- El género y el número de los sustantivos
- Ser y estar con adjetivos
- Las partes del cuerpo
- Los días de la semana
- 49-Los deportes
- 50-La salud y la alimentación
- 51-Actividades relacionadas con la salud y el ejercicio
- El imperativo con usted (ustedes) y tú
- El imperativo y los pronombres de OD y OI
- Estar + gerundio
- Repaso de saludos y presentaciones
- Expresiones para hablar por teléfono
- Las partes de la casa

- Los muebles
- Pedir y dar direcciones en la ciudad (buscar material adicional para cubrir este tema)
- Distancias: de...a, hacia..., hasta..., estar cerca /lejos..., pasar por...
- Expresiones temporales: fechas, ayer, mañana, el próximo..., la semana pasada, el año que viene, por la mañana, de día, esta tarde
- La hora
- El futuro perifrástico
- Expresión *acabar de...*
- Los viajes
- Los medios de transporte
- Se impersonal
- Cantidades: poco, suficiente, bastante, mucho, demasiado
- Ninguno (ningún), ninguna, nada
- Pesos y medidas
- Preposiciones con y sin
- Comidas y bebidas
- Las medidas y los envases
- En el restaurante
- Comparativos
- El superlativo
- Pronombres relativos
- Me gusta / me gustaría
- El clima
- La ciudad y los servicios
- Problemas de la ciudad
- El clima y el medio ambiente
- Pretérito regular e irregular
- Secuencia de acontecimientos
- Las biografías
- Los acontecimientos y conceptos históricos y político-sociales
- El imperfecto
- Contraste pretérito / imperfecto
- Los acontecimientos históricos

**Intermediate Level:** covers most grammatical structures which will give the student the tools needed to achieve more confidence when using the language. The student will learn these grammatical structures while improving vocabulary, pronunciation, comprehension, as well as written and oral skills.

At this level the students learn to use different compensation strategies to communicate their ideas when they do not know the exact structure or word that should be used. Students will also be able to hold conversations on various subjects with native Spanish speakers, using the appropriate forms for each situation. This course emphasizes on cultural aspects of the language.

**Grammar content:**

- Pretérito regular e irregular
- Secuencia de acontecimientos
- Las biografías
- Los acontecimientos y conceptos históricos y político-sociales
- El imperfecto
- Contraste pretérito / imperfecto

- Los acontecimientos históricos
- El presente perfecto
- El participio
- Ya / todavía
- Las profesiones
- Verbos de dativo para expresar sensaciones y sentimientos
- Contraste entre presente perfecto y pretérito perfecto simple
- Usos del gerundio
- Enseñanza y aprendizaje de lenguas
- Adverbios de modo
- Verbos de dativo para expresar sentimientos
- El condicional
- Interrogativas directas e indirectas
- El carácter y la personalidad
- Otros usos del condicional
- Otros verbos como gustar
- Superlativos
- El verbo quedar (se)
- El cine y la televisión
- Los espectáculos
- El ocio y el tiempo libre
- Tú impersonal
- El imperativo
- Estado físico y salud
- Conectores
- Adverbios en mente
- Medicina: accidentes, síntomas y enfermedades
- Se impersonal
- Presente de subjuntivo
- Indicativo y subjuntivo en cláusulas relativas
- Relativos con preposición
- Los materiales y las formas
- Ciencia y tecnología
- Objetos de uso cotidiano
- Repaso del imperfecto y su contraste con el pretérito
- El pluscuamperfecto
- Estar + gerundio en el pretérito y en el imperfecto
- Pero y sino
- La literatura
- El relato de misterio
- Sentimientos y emociones
- El futuro simple
- Cualquier / cualquiera
- Pronombres relativos + subjuntivo
- Expresiones de impersonalidad
- Las empresas y negocios
- La economía y el comercio
- La expresión de opiniones y dudas
- Cuando + subjuntivo

- La expresión de la continuidad y la interrupción
- La tecnología y el medio ambiente
- Verbos de dativo para expresar emociones, consejos y valoraciones
- Verbos que expresan cambios: ponerse, volverse, hacerse
- Ser y estar + adjetivo
- Sentimientos y emociones
- Discurso indirecto
- Posesivos
- Pedir y dar cosas, pedirle a alguien que haga algo
- Es que...
- Correspondencia y mensajes

**Advanced Level:** includes the study of advanced Spanish grammar. The student will begin to handle complex structures -syntactical and morphological-. In addition, the students will face current topics and conversations with a higher level of complexity and abstract thought in order to improve considerably in fluency and precision. This level includes cultural, social and historical aspects on different Hispanic speaking countries as a way to explain the relationship between language, history, and culture.

This course includes a historical background of Latin America and continues with an overview of different cultural manifestations: art, literature, music, traditions and customs.

Short stories, articles and essays, followed by class discussions, are used to cover the content of the course. Works by Costa Rican and other Latin American writers will be introduced as a way to discuss social changes and identity.

**Grammar content:**

- Repaso del pretérito y del imperfecto, énfasis en verbos que “cambian de sentido” al usarse en pretérito o imperfecto: conocer, costar, poder, querer, saber, tener.
- Repaso de diferencias entre ser y estar
- Expresiones con las partes del cuerpo
- Repaso de verbos de dativo
- Se involuntario
- El subjuntivo con verbos de voluntad, influencia o deseo.
- Concordancia de tiempos
- Uso del subjuntivo en cláusulas independientes
- Conectores (buscar ejercicios alternativos para cubrir este tema)
- El subjuntivo con expresiones impersonales
- El subjuntivo en cláusulas relativas
- La influencia del inglés en los países hispánicos
- El subjuntivo con expresiones adverbiales
- El subjuntivo después de conjunciones de tiempo
- Cláusulas condicionales
- Usos de los artículos definidos e indefinidos
- El artículo neutro lo
- La preposición a
- La preposición de
- La preposición con
- La preposición en
- Por y para
- Expresiones con por
- Pares con por y para

- El futuro para expresar conjeturas
- Repaso de verbos reflexivos
- Se impersonal
- La voz pasiva (con ser + participio y pasiva refleja)
- Uso de las formas no personales del verbo: gerundio, participio e infinitivo
- Pronombres relativos
- Refranes populares