

Study Abroad Course Syllabus
 Special Topics: Tropical Biology in the Galapagos
 COA 490 CA, H001 | 3 credit hours
 Winter Intersession 2019: January 2-13, 2019

Program Director and Instructor

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About the Course:

This Study Abroad course will allow you to experience the natural history and tropical biology of one of the most unique habitats in the world, Ecuador’s Galapagos Islands. Lying 563 miles west of continental Ecuador, the Galapagos Islands represent a living laboratory of evolution and island ecology. With the exception of very minimal and highly restricted human settlement, the archipelago remains much as it was during Charles Darwin’s visit in 1835. For the scientist, the Galapagos Islands provide a validation of core concepts in modern evolutionary theory –natural selection and life’s ability to colonize and survive through adaptation.

This course will allow students to experience the Galapagos by visiting several exemplary islands throughout the archipelago. The class will include daily field experiences, such as hikes, snorkeling, and boat excursions. Field trips will emphasize the area’s unique habitats and organisms, including terrestrial and marine ecosystems. The course will cover a wide range of topics including geology, climate, ocean currents, endemism, evolution, species identification, life history of animals/plants, ecological adaptation, conservation, and human history.

The most unique aspect of this course is the learning environment. Lectures are provided ad hoc by your instructors and guides in concert with field experiences. You’ll learn about blue-footed boobies while observing a mating pair dancing in front of you. You’ll discover the unique adaptations of marine iguanas while observing them basking in the equatorial sun. The islands will be our living laboratory, which provides the ideal setting to discover and experience biological concepts.

Course Itinerary:

Note: The itinerary is tentative, as the schedule may require modification due to weather and/or changes mandated by the Galapagos National Park.

DAY	TIME	ITINERARY	OVERNIGHT
Wednesday (1/2)		Arrive in Guayaquil, Ecuador (GYE airport) @ time TBA - Transfer to Guayaquil hotel	Guayaquil
Thursday (1/3)	AM	Flight to San Cristobal	San Cristobal
	PM	Visit La Galapaguera or El Junco Lagoon	

Friday (1/4)		Boat trip to Leon Dormido and Puerto Grande	San Cristobal
Saturday (1/5)	AM	Speedboat to Puerto Ayora, Santa Cruz	Santa Cruz
	PM	Tour of local farm & highlands	
Sunday (1/6)		Boat trip to North Seymour/Punta Carrion OR Bartolome OR Plazas	Santa Cruz
Monday (1/7)		Boat trip to North Seymour/Punta Carrion OR Bartolome OR Plazas	Santa Cruz
Tuesday (1/8)	AM	Speedboat to Puerto Villamil, Isabela	Isabela
	PM	Visit wetlands, Wall of Tears, & Arnaldo Tupiza Breeding Center	
Wednesday (1/9)		Visit highlands & Sierra Negra Volcano	Isabela
Thursday (1/10)		Las Tintoreras & deep water snorkeling	Isabela
Friday (1/11)	AM	Speedboat to Puerto Ayora, Santa Cruz; Darwin Center & GNP Breeding Center	Santa Cruz
	PM	Tortuga Bay	
Saturday (1/12)	AM	Flight from Baltra to Guayaquil	Guayaquil
	PM	Guayaquil City Tour	
Sunday (1/13)	AM	Transfer to GYE Airport - Flight to US @ time TBA	---

Course Materials:

Textbook (**required**): Constant, Pierre. 2006. The Galapagos Islands: A Natural History Guide, Seventh Edition. New York, NY: Odyssee Books. ISBN-13: 978-9622177666

Field Guide (**highly recommended**): Fitter, Julian, Daniel Fitter and David Hosking. 2016. Wildlife of the Galapagos, Second Edition. Princeton, NJ: Princeton University Press. ISBN-13: 978-0691170428

Selected Readings:

*Ideally, we would put these resources on library reserve for students. Since that is not an option for this course, students will be given access to an online file share that will include these materials.

Moore, R. and S. Cotner. 2014. Understanding Galapagos: What you'll see and what it means. New York, NY: McGraw-Hill.

Chapter 1: Evolution and the Galapagos Archipelago. p. 1-10.

Chapter 3: Geology and Climate. p. 69-91.

Chapter 11: The Future of Galapagos. p. 322-349.

Osborne, P.L. 2000. Chapter 12: Isolated habitats and biogeography. In: Osborne, P.L., Tropical Ecosystems and Ecological Concepts. Cambridge, United Kingdom: Cambridge University Press. p. 349-372.

Supplemental materials (**required**): Field notebook with a minimum of 100 pages (preferably bound and waterproof); writing utensils

Other supplemental course materials (not required, but recommended): Camera with waterproof capability, binoculars

Course Requirements:

The course requirements include pre-departure assignments and in-country assignments. Pre-departure assignments will include a personal bio, pre-exam and term paper. In-country assignments will include a presentation (based on your term paper), field notebook daily logs, field notebook daily reflections, field

exam(s), and participation. An online file share will be created for the course and will contain information relevant to the class and trip, including the selected readings.

Full grading criteria are outlined below:

Pre-Departure Assignments	% of Grade	Due Date
Personal Bio	5%	12/21
Pre-Exam	10%	12/21
Paper	15%	12/21
In-Country Assignments*		
Presentations	15%	1/4, 1/6, 1/8
Field Notebook – Daily Logs	15%	1/11
Field Notebook – Daily Reflections	15%	1/11
Field Exam(s)	15%	1/7, 1/11
Participation	10%	---
Total	100%	---

*Due dates for in-country assignments are tentative and based on field schedule. See note below.

Grading Scale:

Grade	Percentage
A	≥ 90%
B	80.0 – 89.9%
C	70.0 – 79.9%
D	60.0 – 69.9%
F	≤ 59.9%

Assignment Details:

NOTE: More details about assignments will be provided and you will be notified in plenty of time to complete pre-departure assignments (likely sometime in October/early November). Due dates for in-country assignments have been provided; however, you must remember this is a field course with intense daily activities, so in-country assignments may be shifted around based on changes in our field schedule.

Pre-Departure Assignments:

IMPORTANT: All pre-departure assignments must be submitted **by email to Darcie** by the due date.

- **Personal Bio:** Since most of us will meet face-to-face in transit to Ecuador, we want you to know a little about each other prior to our first official meeting. This should be a Word document with a paragraph narrative introducing yourself to your instructors and classmates. Please include a picture with your personal bio. Along with a general introduction and background about yourself, please include what you are most excited about learning/seeing/experiencing in the Galapagos.
- **Pre-Exam:** This will be a written test in short answer format. It will include a series of general questions pertinent to the Galapagos and our trip. *This portion is ‘open book’ with the intent that each person has the same general knowledge before we begin our Ecuadorian journey.* Exam questions will be based on the book and selected readings. You will receive the Pre-Exam in early November and will have until the due date to submit this assignment.
- **Paper:** The paper should be approximately 6-10 double-spaced pages, including title page and reference page. Students will be able to pick from a list of provided topics involving various animals occurring in the Galapagos. Refer to the “Paper & Presentation Guidelines” document for full details on this assignment.

In-country Assignments:

- **Presentation:** The presentation should be 10-12 minutes in length and utilize PowerPoint (or other comparable format). Think of it as a “lecture” to your peers on the subject. Presentation content will be the same as your pre-departure paper. Refer to the “Paper & Presentation Guidelines” document for full details on this assignment. **Remember:** While the presentation is not given (and therefore, due) until we are in-country, it is HIGHLY recommended that you finish your presentation before we depart for Ecuador. You will have little time to complete this task and virtually NO access to resources (i.e., internet, library, etc.) in Ecuador.
- **Field Notebook – Daily Logs:** Your field notebook should be carried with you at all times during the trip. Your daily logs should include an overview of our field excursions, including the natural history notes provided by our guides. You are free to use any combination of writing, observations, sketches, etc. that relate to our time in the field. Remember this is a field class and lectures will happen during field activities, so your daily logs are important notes and facts you take from these experiences. These notes will be a primary source of questions for field exams. A species checklist is also required as part of your daily logs, which will serve as an inventory of organisms we identify on each island.
- **Field Notebook – Daily Reflections:** This will be another section of your field notebook. Your daily reflections are essentially a personal reflection journal of what you have learned, experienced, and observed.
- **Field Exam(s):** Field exams will be based on a combination of notes from the individual student presentations, pre-exam questions, daily logs, and/or daily recap sessions. Recap sessions may include slide shows based on images we take to aid with species identification. There will be one or two field exams during the trip. Field exams are planned for January 7 and 11, but will be dependent on our field schedule. It is important that you keep your daily logs current and continuously review the material to be adequately prepared.
- **Participation:** Students are expected to participate in all class activities. If you are not able to participate in a specific activity, you must consult with your instructors. Failure to actively participate in all class activities may result in a lower participation score. Participation includes your oral contributions to both formal and informal discussions. It also includes your overall conduct on the trip. In evaluating your participation, we will consider such questions as the following. Were you on time and prepared? Did you pay attention? Did you take the course matter seriously? Did you engage guides with thoughtful questions? Did you engage the instructors, students, and guides in thoughtful discussion about course material and experiences?

Please note that late assignments are not accepted for credit.

Academic Integrity Statement:

All students at the University of Southern Mississippi are expected to demonstrate the highest levels of academic integrity in all that they do. Forms of academic dishonesty include (but are not limited to):

- Cheating (including copying from others’ work)
- Plagiarism (representing another person’s words or ideas as your own; failure to properly cite the source of your information, arguments, or concepts)
- Falsification of documents
- Disclosure of test or other assignment content to another student
- Submission of the same paper or other assignment to more than one class without the explicit approval of all faculty members involved

- Unauthorized academic collaboration with others
- Conspiracy to engage in academic misconduct

Engaging in any of these behaviors or supporting others who do so will result in academic penalties and/or other sanctions. If a faculty member determines that a student has violated our Academic Integrity Policy, sanctions ranging from resubmission of work to course failure may occur, including the possibility of receiving a grade of “XF” for the course, which will be on the student’s transcript with the notation “Failure due to academic misconduct.” For more details, please see the University’s Academic Integrity Policy: <https://www.usm.edu/institutional-policies/policy-acaf-pro-012> Note that repeated acts of academic misconduct will lead to expulsion from the University.

Academic Support Resources:

If a student has a disability that qualifies under the Americans with Disabilities Act (ADA) and requires special accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies.

Address:

The University of Southern Mississippi
Office for Disability Accommodations
118 College Drive # 8586
Hattiesburg, MS 39406-0001

Voice Telephone: 601.266.5024 or 228.214.3232 Fax: 601.266.6035

Individuals with hearing impairments can contact ODA using the Mississippi Relay Service at 1.800.582.2233 (TTY) or email ODA at oda@usm.edu.

Additional Details Related to the Trip/Course:

A full itinerary will be provided soon after the application deadline (September 17, 2018). Please refer to the “Full Itinerary & Trip Details” document for more information.

Packing Suggestions:

Luggage Considerations – Flights from Ecuador mainland to Galapagos are baggage restricted (size and weight). Please keep in mind that the majority of the trip we will be island hopping, relocating every few days. It is **HIGHLY** recommended that you pack light. Your luggage should include a small backpack that you can use for daily excursions to easily carry field essentials (field notebook, water bottle, camera, etc.). You may want to bring a wet/dry bag, as swimsuits may not have time to dry out between use and moving to our next location.

Binoculars – Nice to have for birding as we hike the various islands. They are not required, as it is easy to get close to all the Galapagos wildlife. If you choose to bring binoculars, a small, low-powered pair is all you need.

Bug Repellent (if you need it) – Flies can be pesky in the Galapagos, but mosquitos are not generally a problem. You may attract paper wasps if you wear yellow clothing.

Cameras – Again, getting up close and personal with wildlife is a common occurrence in the Galapagos. Certainly a camera is essential to capture all the wonderful subjects the Galapagos offers, but is not required. Remember that many of our field activities will involve water (on it or in it), so consider a waterproofing option for your gear.

Clothing – One or two decent sets of clothes will do for the flights to and from Ecuador/Galapagos. In the Galapagos, you will spend your days in shorts, T-shirts, and swim wear. A light rain jacket or poncho is always good to have in case it is misty in the highlands. It can also get cool on the vessel at night, so you may want a light fleece. It is best to avoid yellow clothing, as paper wasps are attracted to that color.

Course materials – Textbook, field notebook, and writing utensils. See binoculars, cameras, and snorkel gear sections for more info on these specific course materials.

Currency – Almost everything is included in the course price once we arrive in Ecuador: airline tickets in Ecuador, ground transportation, tuition and fees, lodging, most meals, guided hikes, required travel insurance, tips for guides/crew, and other benefits. Not included in the program cost is airline travel to/from Ecuador, entrance fee to the Galapagos National Park (\$100 cash/person), a few meals (mostly dinners in Guayaquil and on the islands), extra activities, and spending money.

The U.S. dollar is the primary currency in Ecuador. Small bills are recommended. Personally, I'll carry no more than \$500. ATMs are available in Guayaquil and Puerto Ayora, but will be limited. Credit cards are not widely accepted.

Hydration – Make sure to bring a refillable water bottle/hydration pouch or backpack to take on all our field excursions.

Footwear – Light hiking shoes or sneakers are a must for the islands. Rugged sandals (like Chaco or Teva, but not flip-flops) are good for wet days and beach walks. We will have a combination of wet and dry landings, so you may want a different pair for both types of trips.

Personal Medications – Any personal prescription medications you carry must be in the original vial from the pharmacy. Also, carry with you the written prescription from your doctor or pharmacist. If you are not sure if you get seasick, you may want to bring some medication for motion sickness.

Snorkel gear – Snorkeling equipment on board the boats are included. This includes masks, snorkels, and fins. Wet suits will also be available, if you want one. Wetsuits are typically 3mm full-length suits to provide better protection from cold, sunburn, rocks, and the occasional jellyfish. The water in the Galápagos is quite cool considering the archipelago straddles the Equator. The cold Humboldt current flowing north from Antarctica and northwest from South America account both for this cold water and the productivity of the islands.

You need to be careful when using the rented gear, as any damage or loss of equipment will be billed to you at the end of the cruise. Damage is typically considered as the impossibility of reutilizing the equipment again; normal wear and tear is not considered damage.

You are welcome to bring your own snorkel gear and wetsuit, if preferred. Just remember that you should be packing light AND it may not have time to dry out between our moves around the islands.

Sun Protection – Sunscreen, hats, and sunglasses are necessary as many areas we will visit will lack shade.

Travel Documents – Don't forget your passport! See this section below for full details.

Cell Phone Service

Most U.S. carriers offer an international plan, so you can consult with your individual carrier for rates and plans. Cell service is spotty in the islands, but not a problem in Guayaquil.

Electricity

Current adapters are not required as 110 volt plugs are available in hotels.

First Aid

We'll carry a basic first aid kit to cover minor emergencies. But if you have some particular need or concern, let us know (in confidentiality) and we'll have that available as well if possible.

Flight Info

Ground transportation will be arranged to get our group from the airport to hotel on the day of arrival (January 2, 2019), so it is important that our flights are coordinated to arrive as a group in Ecuador. Details on specific flight connections will be provided soon after the application deadline (September 17, 2018). Do NOT book your flight until you have received this information from us. If you will not be on the group flights to/from Guayaquil, make sure you send Darcie your flight information. We will coordinate transportation to/from the airport with our vendor in Ecuador.

Immunizations

The Centers for Disease Control advises travelers to “make sure you are up-to-date on routine vaccines before every trip. These vaccines include measles-mumps-rubella (MMR) vaccine, diphtheria-tetanus-pertussis vaccine, varicella (chickenpox) vaccine, polio vaccine, and your yearly flu shot.” In addition, Ecuadorian authorities might require you to show a certificate of yellow fever vaccination when entering or leaving the Amazon Basin area, or when continuing travel to other areas of South America. While our class will not travel to the Amazon Basin area, you should consult with your physician about whether you should obtain a yellow fever vaccine prior to departure from the United States. This vaccination needs two weeks before it is effective, so plan accordingly.

You should consider getting a tetanus shot if it has been more than 10 years since your last inoculation. Your physician may also recommend other vaccines and medicines (for yellow fever, malaria, hepatitis B, or rabies, for example), and some physicians will prescribe antibiotics just in case of intestinal sickness. At a minimum, keep your immunization record with your passport.

Additionally, we recommend you check the [CDC website](#) for health information for travelers to Ecuador. This should be done closer to our departure date in case any of the information above has changed.

Passports

Routine processing time for obtaining a passport is 6 weeks. You will not be allowed to travel to Ecuador without a valid passport. More information on passports can be found on the [US Department of State website](#).

Ecuador requires that you have at least six months of validity on your passport. If your passport expires before July 2, 2019, you will need to get a new passport before we depart for the program. Also, STRONGLY recommended that you take with you a **color** photocopy of the front page (the one with your photo) of your passport.