



**UNIVERSIDAD SAN FRANCISCO DE QUITO**  
**COLEGIO: CIENCIAS BIOLÓGICAS Y AMBIENT.**  
**Semestre: 201820 - Primer Semestre 2019/2020**  
**Horario: LMIJV 09:00 - 11:50**

**DATOS DEL PROFESOR:**

**Profesor:** Esteban Suarez Robalino  
**Correo electrónico:** esuarez@usfq.edu.ec  
**Oficina:** Darwin 005  
**Horario de oficina:** by appointment.

**DATOS DEL CURSO:**

**CURSO: ECL-0440 - TROPICAL ECOLOGY**

**NRC:** 4878

**Créditos:** 4

**Prerequisitos:** Verificar prerequisitos en sistema académico BANNER.

**Co-requisitos:** El curso no tiene co-requisitos

**DESCRIPCIÓN DEL CURSO:**

In this course we will analyze the fundamental theories that explain the structure and dynamics of plant and animal populations and communities in tropical ecosystems, both in ecological and evolutionary time. We will study the different types of terrestrial and aquatic tropical ecosystems, and we will examine the main methods to sample and describe populations and communities in theory and in practice. Moreover, we will analyze the diverse Ecuadorian ecosystems (e.g. tropical rain forest, páramo, dry forest), their fauna, flora, cultures, protected areas and the main environmental issues affecting them.

**RESULTADOS DE APRENDIZAJE ESPECÍFICOS DEL CURSO:**

- Students will learn the main factors that determine climatic patterns at the global and local scales.
- Students will learn the main features of tropical rain forest ecosystems and high-altitude Andean grasslands (páramo), with emphasis on the structure and function of these ecosystems.
- Students will understand the main issues that constrain the conservation of biodiversity and natural ecosystems in the tropical region.

**CONTENIDOS DEL CURSO:**

- Introduction to tropical ecosystems (world distribution of tropical climates, biogeographical regions)
- Neotropical biota: influence of conditions and resources in the natural history of tropical species
- Tropical rain forests: structure, diversity and functioning
- Tropical rain forests: ecological interactions
- Páramo (high altitude grasslands): structure, diversity and functioning
- Páramo: human dimensions
- Tropical montane forests

**METODOLOGÍA PARA LA INTEGRACIÓN ENTRE LOS CONTENIDOS TEÓRICOS Y PRÁCTICOS:**



Las metodologías de enseñanza utilizadas para impartir los cursos de la USFQ, siguiendo la filosofía de las Artes Liberales, fomentan el diálogo y facilitan la construcción del conocimiento mediante el constante intercambio de ideas y experiencias entre profesores y estudiantes. Se espera que en todos los cursos los contenidos teóricos sean vinculados con la práctica profesional y contexto laboral donde se desempeñarán los estudiantes a futuro, procurando integrar actividades y simulaciones de diversa índole que fomenten la comprensión de los contenidos contextualizados con la práctica y la realidad.

### EVALUACIÓN DEL CURSO:

Category	Description	% of final grade
Río Topo field project presentation	Please see below	20
Páramo exercise	Please see below	20
Tiputini field project presentation	Please see below	20
Waorani project presentation	Please see below	20
Field journal	Please see below	20

### Assignments and grading

**1.- Field projects:** During the field trips, students will participate in different field projects and exercises. All the students are expected to participate actively and creatively in these projects. Specific instructions will be provided for each activity. 20% of your grade will come from the successful completion of each field project.

**2.- Field journal:** during the field trips to the Tiputini Biodiversity Station (TBS), Río Topo, and Papallacta, students will take notes about the discussions and observations that we will make at each site. By combining their notes with a personal account of each field trip, students will write a field journal describing their experiences during the field trips and reflecting the main concepts that we will be learning throughout the class. Additional details about this field journal will be given later during the class (20%).

### BIBLIOGRAFÍA PRINCIPAL:

Reading package will be provided through e-mail during first day of classes

### POLÍTICAS:

Todos los cursos de la USFQ se rigen por las normas de ética de aprendizaje, ética de la investigación y ética del comportamiento que constan en el [Código de Honor y Convivencia de la USFQ](#); y por las políticas y procedimientos detallados en el [Manual del Estudiante](#)

- Students will be encouraged to critically think about the main similarities and differences between tropical and temperate ecosystems.

- The main attitude that we hope to promote among the students is a close attachment to natural ecosystems, based on the first-hand experiences that we will have throughout the course.

**CRONOGRAMA DE ACTIVIDADES**

Detailed calendar	
<b>Monday, August 19<sup>th</sup></b>	
09:00	Introduction to Tropical Environments
<b>Tuesday, August 20<sup>th</sup></b>	
09:00 -12:00	Páramo ecosystems
<b>Wednesday, August 21<sup>th</sup></b>	
07:00	Take bus to Papallacta
08:00	Páramo hike
14:00	Lunch
15:00	Hot springs
<b>Thursday, August 22<sup>th</sup></b>	
9:00 – 12:00	Tropical Rain Forest I
<b>Friday, August 23<sup>th</sup></b>	
9:00 – 12:00	Tropical Rain Forest II (Human Dimensions)
<b>Monday, August 26<sup>th</sup></b>	
06:00	Travel to Tiputini
18:00	Week's work planning
19:00	Dinner
20:00	Night hike
<b>Tuesday, August 27<sup>th</sup></b>	
06:00	Breakfast
07:00	Orientation hikes
12:00	Lunch
14:00	Orientation hikes
19:00	Dinner
20:00	Camera-trap project presentation
<b>Wednesday, August 28<sup>th</sup></b>	
06:00	Breakfast
07:00	Field project design
09:00	Field work
12:00	Lunch
13:00	Field work and data analysis
19:00	Dinner



20:00	Field project presentations
<b>Thursday, August 29<sup>th</sup></b>	
06:00	Breakfast
08:00	Waorani project
10:30	Waorani project presentations
12:00	Lunch
13:30	Soccer!
15:00	Flotada
19:00	Dinner
20:00	If possible, caiman watch!
<b>Friday, August 30<sup>th</sup></b>	
06:00	Breakfast
07:00	Travel to Quito

<b>Monday, September 2<sup>nd</sup></b>	
9:00 – 12:00	Tropical Montane Forests
<b>Tuesday, September 3<sup>rd</sup></b>	
08:00	Travel to Río Topo
12:00	Lunch
14:00	Set up field equipment
19:00	Dinner
<b>Wednesday, September 4<sup>th</sup></b>	
07:00	Breakfast
09:00	Field work
13:30	Lunch
15:00	Data analysis
17:30	Results presentation and discussion
19:00	Dinner
<b>Thursday, September 5<sup>th</sup></b>	
08:00	Breakfast
09:00	Waterfall hike
11:00	Return to Quito
<b>Friday, September 6<sup>th</sup></b>	
9:00 – 12:00	Final Exam



**Este Programa de Estudio (Syllabus) fue revisado y aprobado por la coordinación del área académica o departamento responsable. En caso de que sea necesario realizar cambios/ajustes al programa de estudio, debe solicitarlo a la coordinación del área académica o departamento responsable para que los cambios/ajustes aprobados se reflejen en el sistema de Diseño Curricular.**