

# SA/INT 301: Biodiversity and Conservation Tropical Rainforests

## Credit Hours: 4

### Tentative Course Syllabus for Summer 2020

*Location:* Truman Campus/Peru

*Instructors:* Stephanie Foré/ Enrique Pareja

#### Course Description

Students in this course will learn and apply principles of scientific inquiry with emphasis on field methods in ecology while developing an understanding of the ecological dynamics of South American tropical rainforest. In addition to this, students will become familiar with current conservation initiatives in the area and the implications on both local and global levels. Students will begin this course on campus with coursework aimed at providing background and tools to develop their research project. The class will travel as a group to Peru to spend 9 days at Sachavacayoc Center in the Tambopata National Reserve. While at the center students will conduct research in the forest. In addition, we will hike and boat to see different habitats and organisms in the preserve. Cultural experiences while at the center will include a service day in Puerto Maldonada and guest speakers. The Peru adventure will end with 3.5 days in the Lima area with walking tours in the city and a bus tour over the Andes Mountain to La Merced. The class will fly back to Missouri to complete the analysis of data and prepare reports of their work.

#### Materials and Supplies:

#### Required: Health Certificate of Vaccination against Yellow Fever

##### Necessary Things

###### Equipment

Raincoat or rain poncho  
Day pack  
Flashlight or headlamp  
Spare batteries (2 sets)  
2-one liter water bottles  
Lightweight Sleeping Bag  
Bound composition book  
Pencils

###### Clothing & Footwear

Hat  
2-3 Long-sleeved shirts  
2-3 Loose-fitting pants (not jeans)  
Sweatshirt or jacket  
Crew socks (not ankle socks)  
Sturdy closed-toed shoes  
Leather gloves

###### Personal Items

Personal toiletries  
Soap and shampoo  
Personal medication

##### Recommended Things:

###### Equipment

Camera  
Computer  
Binoculars  
Plastic bags

###### Clothing & Footwear

Rubber boots  
(A collection of rubber boots, are available at the center; no guarantee that you will find your size or style)

###### Personal Items

Insect Repellent  
Sunblock  
Sunglasses

#### Course Objectives

The first goal of this course is to achieve an understanding of scientific inquiry including the variety in methods and approaches that constitute the *methods of science*. Students will achieve this by:

- Identifying mechanistic and materialistic processes responsible for the natural world's attributes.
- Investigating these processes by developing appropriate research questions and hypotheses.
- Planning and executing investigations based on these questions and hypothesis
- Experiencing a variety of data collection methods in field settings

- Analyzing data collected using a variety of methods and tools
- Presenting and discussing scientific interpretation based on data analysis.
- Discuss the appropriateness of scientific evidence.
- Discuss the importance a scientific perspective in the quality of human life and the impact on our biosphere

The second goal of this course is to understand the complex ecological dynamics that make up the tropical rainforest ecosystem. To achieve this, students will have first-hand experience in at a research station/facility located in the Amazon rainforest. During this time students will have the opportunity to

- Analyze and describe the variety of microhabitats that make up a tropical rainforest ecosystem through on-site observation, exploration and investigation.
- Explain different aspects of rainforest ecological dynamics by carrying out off-site literature syntheses and on-site investigations.

The third goal of the course is to provide opportunities for students to become familiar with the rationale behind conservation initiatives with emphasis in the local area. This will include discussing education processes as well as local and global social and economic dynamics.

- Discuss the need for conservation initiatives with specific emphasis on tropical rainforests.
- Analyze and discuss the role and impact of community-based conservation approaches, including participatory education.
- Discuss the role of scientific inquiry as part of the conservation biology and education processes.

Finally, students will have the opportunity to engage and explore different aspects of the local culture including country-wide social and cultural dynamics, both past and present. This will include

- Interactions with the local community in order to develop an understanding of its recent past and current history from a cultural and economic perspective
- A brief overview and exposure to the modern aspects of local culture in the city of Lima.

#### **TIME INVESTMENT EXPECTATIONS OF STUDENTS**

This course has a significant time investment expectations; the minimum expectations is 2 hours of independent work for every hour of supervised work. Prior to leaving for Peru, we will have 6 days on campus with 3 hours of class/day and 9 days of research time in Peru with 5 hour of supervised time/day. Upon return to campus, students will have one week to complete their final assignments with 3 hours of class/day.

#### **CLASS TOPICS AND ASSIGNMENTS – (Note that all intermediate products will have a grade.)**

The course will have 3 core topics and 4 elective topics (to be decided based on faculty expertise and student interest)

##### *Core topics*

- Basic statistics and analysis tools (including spreadsheets)
- Sampling, data collection and analysis.
- Rainforest ecology

##### *Suggested Elective topics (based on resources and interest)*

- Avian diversity and distribution
- Human impact on the Amazon
- Mammal diversity and distribution
- Insect diversity and distribution
- Community based conservation
- Plant diversity and distribution

- Reptile & amphibian diversity and distribution
- Ecosystem dynamics

### **Primary Course Assignments**

Students will complete 5 assignments:

- Report of habitat assessments (individual)
- Research project (group)
- Literature synthesis (individual)
- Class discussion (group)
- Reflective journal (individual)

#### Habitat Assessments

As a class, we will visit a number of different habitats. As a class we will collect a number of different types of data to assess each habitat. Each student is responsible for collecting data and sharing the data collected for this class project. With the shared data, each student will assess the data to describe each habitat. This assignment will include a written report that describes and compares the different habitats.

#### Research project (group)

Students will plan and carry out one research of their own, they will be responsible for designing the investigation, collection and analysis of data and will conclude with a presentation of their findings. This project will be conducted in groups of 2-3. Data collection responsibilities will be shared among all class participants. In essence each group is responsible for **one** project, but data collection responsibilities are shared by the class as part of the field experience. This assignment will include a written proposal, a presentation in Peru reporting progress, and final technical report.

#### Literature synthesis (individual)

Students will be divided into 4 groups based on the elective topics selected. Each student will be responsible for a literature synthesis paper based on a topic of their interest (assignment 2) and each group will be responsible for leading an evening on-site discussion on their synthesis papers (assignment 3).

#### Literature synthesis paper (individual)

Students will select a topic of their personal interest and carry out a review and synthesis of existing literature. They will then write a paper that either provides an argument on a controversial issue, addresses importance or explains the significance of the topic within the context of the course objectives.

#### Class presentation/discussion (group)

Students will be divided into 4 groups based on the elective topics selected and each group will be responsible for leading an evening on-site discussion on their synthesis papers. There is no prescribed format for the discussion. Groups may elect to have a presentation/lecture, experiential activity, class discussion, debate, etc. However, the outline of the plan should be discussed with the instructors prior to departure in order to ensure it satisfies the requirements of the course.

#### Reflective Journal

Reflection leads to a deeper understanding of any human experience. Keeping a reflective journal will allow you to document and engage what you are exposed to as well as extract deeper meaning of both the events, yourself and the interplay that arises from this. All students will keep a Field Journal, this includes daily personal entries. You will also be assigned specific journaling entries that address course themes from the class readings and course discussions. This journal will be evaluated for the in-depth quality of the reflections contained within.

#### Participation points

It is expected that students:

- Arrive on time and fully participate in **all** activities in a positive way.
- Conduct research in an ethical manner with consideration for the community and the environment

- Contribute actively, positively and respectfully in **all** group activities and discussions.
- It is also expected that you respect the local people and their customs and a good representative of your school and country.

### **Tentative Grading and Assessment**

The following are the proposed point assignment and grade boundaries for the BIOL 320 course:

Research	30%
Readings, synthesis and discussion	30%
Reflective Journal	20%
Participation	20%

Total points: 100%

The following grades are guaranteed (percentage boundaries will be rounded to the nearest percentage point):

90-100	=A
80-89	=B
70-79	=C
60-69	=D
<60	=F

### **Proposed Course Schedule**

The course will be divided into four parts:

#### *Part I (From May 26<sup>th</sup> to June 5<sup>th</sup>) – Truman Campus and international travel*

We will be meeting on Truman campus with 3-hour meetings per day (Excluding Saturday and Sunday). The purpose of these be to:

- Become familiar with the basic natural history and societal context of the region where the Sachavacayoc Research Center is located.
- Understand and practice the basic field methods to be used while on-site.
- Understand safety and security practices that are specific to the area.
- Start working on the four assignments that are part of the course-work.
- Travel to Sachavacayoc Research Center.

#### *Part II – In country and on-site (from June 6<sup>th</sup> through June 15<sup>th</sup>)*

This will comprise the bulk of the classwork and research experience. Work will be divided into morning, afternoon and evening sessions. During the morning and afternoon sessions students will carry out a variety of activities including site exploration and data collection and analyses. The evenings will be either debriefing sessions or short lectures. The following will be the guidelines:

- Each student is responsible for habitat assessments
- Groups of students are responsible for one investigation
- Data collection responsibilities will be shared among all groups.
- Throughout the process students will also get the opportunity to interact with members of the local community of Infierno.
- Work on course assignments will continue with due dates being as follows:
  - o *Research project*
    - On-site presentation of research, including progress report
  - o *Topic presentation:*
    - Each group will be responsible for leading an evening session on their topic area of choice.

- *Reflective Journal:*
- Travel to Lima

*Part III – In-country cultural experience (June 16<sup>th</sup> through June 18<sup>th</sup>)*

This will be a continuation of the initial experience with the Infierno Community. Students will get the opportunity to engage with the local culture and visit historical sites and monuments in Lima. Students will get the opportunity to experience the more modern aspect of local culture as represented in the capital city of Lima. This will include

- An afternoon and evening in the residential area of Lima
- A day tour to historical downtown Lima
- Bus tour habitat transitional zones as we travel up and over the Andean Mountains
- Class assignments will continue as follows:
  - *Reflective journal*
  - *Habitat assessment*

*Part IV – Return and final academic assignments (June 19 -26)*

On arrival back home, students will complete the final version of remaining course assignments. No class meetings will be held but instructors will be available to discuss progress as needed. These will be submitted digitally via email in Microsoft word files using APA format as follows:

- *Research project Technical Report*
- *Literature synthesis paper:* Should include reflections on the on-site discussion/ presentation

**Course Policies**

*Attendance and Participation Policy*

Regarding attendance, the general catalog states:

“A student is expected to be present at all classes. Regular class attendance is necessary in order for a student to achieve the desired standard of academic achievement. Irregular attendance normally results in lower levels of achievement. Students are therefore expected to contact instructors as soon as possible when an absence occurs.”

Participation in the field component of the course is obligatory and should follow the guidelines for all programs under the regulations of the study abroad office.

More information can be found in the General Catalog:

[http://catalog.truman.edu/content.php?catoid=13&navoid=625#Attendance\\_Policy](http://catalog.truman.edu/content.php?catoid=13&navoid=625#Attendance_Policy)

Attendance is required for all class meetings and in-country activities.

- While on campus, an “excused” absence is any reasonable absence which is reported by the student to the instructor within a reasonable time period prior to class (at least 24 hours).
- While on campus, after your second **unexcused** absence, each subsequent absence will result in a one third of a grade penalty from your final grade. Simply informing you will be absent does *not* count as an unexcused absence. If you have any doubt, ask the instructor.
- While in-country, any reason a student may have to miss a planned activity **must be communicated to the instructor immediately.**
- No exception will be made in any case unless an unexpected emergency arises beyond the student’s control. In this case, **the issue should be discussed and resolved with the instructor as soon as possible.**
- Credit will not be given for in-class participation/assignments if the student is not in the room during the session.

### *Late Assignments*

All assignments will be due at the onset of the class indicated on the tentative schedule. All late assignments must be cleared with the instructor before being turned in. Points will be deducted for lateness in all assignments up to and including no credit, depending on the quality of work submitted.

### *Flexibility Clause*

The established requirements, assignments, policies, evaluation and grading procedures, etc. are subject to change. Students' experiences and needs, as well as information that may emerge throughout the course of the semester, will be considered in modifying this course syllabus.

## **Academic Integrity**

### *Academic Misconduct*

In the Truman Student Conduct Code (8.020.01), the term "academic dishonesty/misconduct" is defined as to include, but not to be limited to any one of the following acts:

- *Cheating*: Defined as "using or attempting to use unauthorized (a) materials, (b) information, or (c) study aids in any academic exercise."
- *Fabrication*: Defined in the Code as "unauthorized (a) falsification or (b) invention of any information (including research data) or citation in an academic exercise."
- *Facilitating Academic Dishonesty*: Defined in as "(a) assisting or (b) attempting to assist another to commit an act of academic dishonesty, whether or not that action is associated with any particular course."
- *Sabotage*: Defined in the Code as, but is not limited to, "the unauthorized interference with, modification of, or destruction of the work or intellectual property of another member of the University community."
- *Plagiarism*: This is a unique kind of academic dishonesty in which one person steals another person's ideas or words and falsely presents them as his/her own product<sup>1</sup>. In the Student Conduct Code, plagiarism is defined as:

... representing the words or ideas of another as one's own in any academic exercise. The term 'plagiarism' includes, but is not limited to, (a) the use, by paraphrase or direct quotation, of the published or unpublished work or sections of a work of another person without full and clear acknowledgement; (b) the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials, including material taken from or ordered through the Internet; or (c) unacknowledged use of original work/material that has been produced through collaboration with others without release in writing from collaborators.

For more details, you can consult [The Office of Citizenship and Community Standards \(OCCS\)](#)

### *Authorship Verification*

For all assignments completed entirely or in part out of class, the instructor reserves the right to interview the student about the work to verify authorship. A student who is unable to demonstrate a basic understanding of the submitted work will be reported for academic dishonesty and an appropriate penalty will be applied.

### *Copyright Policy*

Students may not distribute copies of copyrighted materials to other students. This includes such things as PowerPoints, handouts, podcasts, etc. If you need further clarification, please consult the Truman [Copyright Information Center](#).

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<sup>1</sup> Purdue University, (1999) "Academic Integrity: A Guide for Students."

### **Technology policy**

At times, electronic devices will be used in class to assist your learning experience. However, the use of such devices for a purpose other than academic and related to the course is unacceptable. You are required to have your devices with all sound and warnings disabled throughout the duration of our class meetings. If you violate this policy, you will be warned once and then asked to leave the class if such behavior persists. If extenuating circumstances require you to violate this policy, please see me as soon as possible so that arrangements can be made. Electronic devices used for prosthetic or accessibility purposes may only be used after I have received a signed accommodation letter from the Disability Services Office.

### *Recording and Electronic Devices:*

During class meetings and presentations, the use of cameras, video, audio taping devices, or any other kinds of electronic devices (including telephones, tablets, Google glasses, and Bluetooth devices) is allowed only after obtaining permission from the instructor *and* presenter(s); otherwise, the use of such devices is prohibited.

### **Students with disabilities**

It is our goal at Truman to provide, for all students, opportunities to learn to the best of their abilities and appropriate opportunities to demonstrate this learning. The classroom environment will be adapted to provide reasonable accommodations for learning differences and disabilities when necessary and when requested. If accommodations are needed, please inform the Disability Services Office (x4478) and the instructor of this course by the 2nd class meeting. For more information check the following link <http://disabilityservices.truman.edu/>.

**Note:** Given the nature and location of the in-country activities, it may not be possible to provide accommodations for certain needs. If you have any concerns, please consult with the instructor as soon as possible to ensure you are able to get the best possible learning experience in the course.

### **Nondiscrimination Policy:**

Truman State University is a community of people characterized by respect for diversity that emphasizes the dignity and equality common to all individual faculty, staff, and students. The University does not discriminate on the basis of race, color, religion, sex, national origin, ancestry, age, disability, or veteran status in employment or in any of its programs or activities. Truman State University is an Equal Opportunity/Affirmative Action employer. A grievance procedure incorporating due process is available to any person who believes he or she has been discriminated against.

### **Title IX**

Truman State University and its faculty are committed to supporting our students and fostering an environment that is free from bias, discrimination, and harassment. If you have encountered any form of sexual misconduct (e.g., sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you report this to the University. If you speak with a faculty member about an incident of misconduct, that faculty member is a "mandated reporter" and must notify Truman State University's Title IX Coordinator, [Jamie Ball](#) (Violette Hall 1308, phone (660) 785-4354) and share the basic fact of your experience with her. The Title IX Coordinator will then be available to assist you in understanding all your options and in connecting you with resources both on and off campus.

If you would prefer to have a confidential conversation about an experience, the counselors at University Counseling Services are NOT mandated reporters and they can be reached at (660) 785-4014. For after-hours crisis counseling, call (660) 665-5621.

For more information regarding Truman's policies and procedures relating to any form of gender discrimination, please see <http://eoaa.truman.edu/university-non-discrimination-policy/> and <http://eoaa.truman.edu/complaint-reporting-resolution-procedure/>.

**Emergency Procedures:***On-campus emergencies*

In each classroom on campus, there is a poster of emergency procedures explaining best practices in the event of an active shooter/hostile intruder, fire, severe weather, bomb threat, power outage, and medical emergency. This poster is also available as a PDF at the following link: <http://police.truman.edu/files/2015/12/Emergency-Procedures.pdf>. Students should be aware of the classroom environment and note the exits for the room and building. For more detailed information about emergency procedures, please consult the Emergency Guide for Academic Buildings: <http://police.truman.edu/emergency-procedures/academic-buildings/>.

This six-minute video provides some basic information on how to react in the event there is an active shooter in your location: <http://police.truman.edu/emergency-procedures/active-shooter/active-shooter-preparedness-video/>

Truman students, faculty, and staff can sign up for the TruAlert emergency text messaging service via TruView. TruAlert sends a text message to all enrolled cell phones in the event of an emergency at the University. To register, sign in to TruView and click on the "Truman" tab. Click on the registration link in the lower right of the page under the "Update and View My Personal Information" channel on the "Emergency Text Messaging" or "Update Emergency Text Messaging Information" link. During a campus emergency, information will also be posted on the TruAlert website <http://trualert.truman.edu/>.

*In-country emergencies*

In-country emergency procedures will follow the guidelines established by the study abroad office. In case of emergency contact the local authorities and/or medical services as needed. Then contact immediately TEAM ASSIST at +1 713 267-2525 (call collect from abroad). The service is available 24/7. For services provided by TEAM ASSIST, consult: <http://www.culturalinsurance.com/tru0063/tru0910.pdf>

Our TEAM ASSIST ID is: GLB9111657. The information is on your individual card

To contact the American Emergency Assistance to American Citizens Abroad  
OVERSEAS CITIZENS SERVICES: Call +1 (888) 407-4747 (from overseas: +1 (202) 501-4444) for answers related to questions concerning the:

- [Death or Injury of an American citizen abroad](#)
- [Arrest/detention of an American citizen abroad](#)
- [Victims of crime abroad](#)
- [American citizens missing abroad](#)
- [Abduction of a child abroad](#)