Advanced Academic Programs  
Zanvyl Krieger School of Arts and Sciences  
Johns Hopkins University  

Course Syllabus  

Tropical Ecology and Conservation of African Wildlife  
AS.420.630.91.SP20  

Winter Intercession (Onsite in Cameroon from January 3 – January 18, 2020)  

Instructor Information  

Instructors:  
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Class GroupMe:  
Join the instructors and your classmates on GroupMe for pre-course planning and any course related informal conversations. You will need to download the GroupMe app on your smartphone before joining.  

https://groupme.com/join_group/53829600/DyTEtaDz  

Course Description  

This is an immersive study abroad field course in Cameroon, Africa with a strong focus in tropical ecology field methods for the purpose of conserving African wildlife. The Congo Basin is the second largest tropical rainforest in the world, storing an estimated 25-30 million tons of carbon stocks, and home to nearly 20% of Earth’s species. There is a critical need to better understand the Congo Basin’s rainforests because we cannot conserve what we do not understand. The field component of this course takes place at the Djä Nature Reserve in southeast Cameroon at a remote research station operated by the Congo Basin Institute. The Dja rainforest is a diverse and understudied ecosystem. This course will cover basic field methods including but not limited to biodiversity assessments, species population estimates, setting up and checking large mammal camera traps, auditory surveys of primate vocalizations, mist netting for tropical birds,
and other field techniques. Course content will focus on problems such as ecological impacts of biodiversity loss, drivers of wildlife poaching, conservation strategies and best practices. Students will be introduced to leaders in Central African wildlife conservation as well as traditional ecological knowledge experts from communities adjacent to the Dja Nature Reserve such as indigenous residents from the Baka tribal group. This course will also explore the broader social, political, economic, and climate change impacts to wildlife conservation efforts in Africa. Credits: 4

Prerequisite: AS.420.611 – Principles and Methods of Ecology

Course Goals

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

1. Demonstrate knowledge of the wildlife, ecosystems, and cultures of Central Africa and the Congo Basin.
2. Apply tropical ecology and conservation concepts as they relate to the Dja Nature Reserve.
3. Demonstrate a variety of field methods and techniques used to conduct tropical natural resource studies including but not limited to biodiversity assessments, species population estimates, setting up and checking large mammal camera traps, auditory surveys of primate vocalizations, mist netting for tropical birds, and other field techniques.
4. Evaluate the quality of data collected in the field.
5. Analyze broader social, political, economic, and climate change impacts to wildlife conservation efforts in Central Africa.

Background

Johns Hopkins University (AAP-ESP), is pleased to announce plans to offer an in-field class in Cameroon, Africa, at the Congo Basin Institute’s Bouamir Research Station in the middle of the Dja Faunal Reserve focused on field ecology methods and African wildlife conservation.

The Congo Basin is the second largest tropical rainforest in the world, stores an estimated 25-30 million tons of carbon stocks, and is home to nearly 20% of Earth’s species. It is also ground zero for the potentially devastating impacts of climate change on food and water security, human health, and the environment. Meeting ambitious global conservation goals requires that we succeed in conserving the Congo Basin. We cannot conserve what we do not understand, and there is a critical need to better understand the Congo Basin’s rainforests.

The course will be based at the Congo Basin Institute (CBI), an institution operated by UCLA and used by multiple international collaborators. CBI has a campus in Yaoundé, the capital of Cameroon, where the field course will begin for the introductory component. Here, students will be introduced to the multiple ecosystems of the Congo Basin, the many environmental and social threats to wildlife conservation, and the various innovative tools and technologies used to mitigate species extinction.

The students will then be led to the Dja Nature Reserve in southeast Cameroon, where CBI has a research station used for researchers and field courses. More than 100 mammal species (including five threatened species), 350 bird species, and 1,500 plant species are known to inhabit the reserve, including the endangered African forest elephant (Loxodonta cyclotis), western lowland gorilla (Gorilla gorilla), chimpanzee (Pan troglodytes), and multiple vulnerable species including the mandrill (Mandrillus sphinx), three pangolin species, black colobus (Colobus satanas), Bates’s Weaver (Ploceus batesi), the largest known breeding colony of the Grey-necked rockfowl (Picathartes oreas), and many other rare or threatened species. Situated in a diverse and understudied ecosystem, these facilities are a valuable resource for researchers and students from evolutionary biology, ecology, and anthropology, among other disciplines.
This course will have elements field and classroom components, and these multiple teaching styles will be implemented daily. Most fieldwork, including nature walks, rapid biodiversity assessments, species population estimations, setting up and checking large mammal camera traps, and general field techniques, will be instructed in the early to late mornings when wildlife are most active and visible to students. This fieldwork component will be led by the instructor as well as CBI-based field guides. When appropriate, CBI experts will be included for wildlife-specific lectures (e.g. primate experts will be invited for lowland gorilla treks and surveys). Late afternoon and early evenings will be dedicated to lectures at the research station, presentations by local researchers and conservation practitioners, and interviews with local residents from the Baka tribal group about their attitudes toward conservation and historic and current interactions with wildlife.

Although the emphasis of the course will be on understanding the ecology of wildlife in the rainforest ecosystems of the Congo Basin, there will also be a strong focus on the ecosystem structures and functions that facilitate and are dependent on wildlife presence. Finally, humans are a key component on the success of wildlife conservation efforts in the Congo Basin and beyond. The students will be introduced to local leaders in conservation, as well as members of the community from the ecosystems we’ll be working in. Students interested in community-based conservation, social science research techniques, or the incorporation of traditional ecological knowledge (TEK) in conservation will have opportunities to have their studies focused on the local community members during the run of the course.

Field-based components are an integral part of the coursework in the Environmental Science and Policy Program. This course will cover basic field methods, will focus on ecological problems such as ecological impacts of biodiversity loss, drivers of wildlife poaching, conservation strategies and best practices. This course will expose the students to wildlife-specific biodiversity assessments, and the data collected on population size, health, and locations of wildlife will be shared with CBI.

**Course Materials**

**Required Textbooks**


**Required Supplies**

*Rite in the Rain All-weather Journal Notebook* No. 393, 4-5/8” x 7” size ([forestry-suppliers.com](https://forestry-suppliers.com) or [RiteintheRain.com](https://RiteintheRain.com))

*LifeStraw Bottle* ([https://www.amazon.com/dp/B01G7SQBPQ/ref=cm_sw_em_r_mt_dp_U_kOGRCbHTWP4B7](https://www.amazon.com/dp/B01G7SQBPQ/ref=cm_sw_em_r_mt_dp_U_kOGRCbHTWP4B7))


**Other Readings**
Other readings will be posted in the online classroom with support from JHU reserves (EReserves or (ARES)).

Student Mobility, Health, and Fitness

Good health, physical fitness, and mobility are essential (we will be on the move in this course, and hiking ability is expected). This course is physically strenuous and requires an 8 hour, 30-kilometer hike both into and out of the jungle. Students should consult with their doctor to determine their physical fitness before registering for this course. It is also strongly recommended that students train for the 8-hour hike in the weeks that lead up to the course.

Pregnant students must be informed of the risk associated with participating in this field course. The Bouamir Field Station is in a remote location, and the nearest hospital is in the city of Yaoundé (2-3 days away). Zika infection is a high risk in this part of Africa (the CDC advises pregnant women against travel to Cameroon).

Openness to a cross-cultural experience is necessary too.

Vaccinations and Medication

Well before departure, check with your doctor to see if you need any immunizations or medications before traveling. Immunization information can also be found at the sites for the Center for Disease Control and the World Health Organization International Travel and Health. CDC health information for travelers to Cameroon can be found here, and a list of vaccinations that are required and strongly recommended for the course are displayed below.

<p>| CDC Vaccinations and Medicines for Travel to Cameroon (descriptions courtesy of CDC) |
|---------------------------------|------------------------------------------------------------------------------------------------|
| Routine vaccinations            | 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. |
| Yellow Fever                    | <strong>Required</strong> for entry into Cameroon |
| Hepatitis A                     | CDC recommends this vaccine because you can get hepatitis A through contaminated food or water in Cameroon, regardless of where you are eating or staying. |
| Malaria                         | You will need to take prescription medicine before, during, and after your trip to prevent malaria. Your doctor can help you decide which medicine is right for you, and also talk to you about other steps you can take to prevent malaria. |
| Typhoid Fever                   | You can get typhoid through contaminated food or water in Cameroon. CDC recommends this vaccine for most travelers. |</p>
<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholera</td>
<td>CDC recommends this vaccine for adults who are traveling to areas of active cholera transmission.</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>You can get hepatitis B through sexual contact, contaminated needles, and blood products, so CDC recommends this vaccine if you might have sex with a new partner, get a tattoo or piercing, or have any medical procedures.</td>
</tr>
<tr>
<td>Meningitis (Meningococcal disease)</td>
<td>CDC recommends this vaccine if you plan to visit parts of Cameroon located in the meningitis belt during the dry season (December–June), when the disease is most common.</td>
</tr>
</tbody>
</table>
| Polio                         | You may need a polio vaccine before your trip to Cameroon, especially if you are working in a health care facility, refugee camp, or humanitarian aid setting. This kind of work might put you in contact with someone with polio.  
  - If you were vaccinated against polio as a child but have never had a polio booster dose as an adult, you should get this booster dose. Adults need only one polio booster in their lives.  
  - If you were not completely vaccinated as a child or do not know your vaccination status, talk to your doctor about getting vaccinated. |
| Rabies                        | Rabies can be found in dogs, bats, and other mammals in Cameroon, so CDC recommends this vaccine for the following groups:  
  - Travelers involved in outdoor and other activities (such as camping, hiking, biking, adventure travel, and caving) that put them at risk for animal bites.  
  - People who will be working with or around animals (such as veterinarians, wildlife professionals, and researchers).  
  - People who are taking long trips or moving to Cameroon  
  - Children, because they tend to play with animals, might not report bites, and are more likely to have animal bites on their head and neck. |

**Health and Accident Insurance**

Participants should make sure their health insurance and accident insurance covers them while traveling abroad. Additional coverage can be purchased through a variety of travel insurance options. To compare policies and for further information, visit a travel insurance comparison site such as Insure My Trip or Square Mouth.

**HX Global, Inc.**

Johns Hopkins is a member of HX Global, Inc., which covers JHU students while participating in international courses. HX Global, Inc. is medical and emergency evacuation assistance, it is NOT health insurance. Students are encouraged to review HX Global, Inc. benefits/information by going to MyJH, selecting Travel, then Travel Program. If you cannot access it through JHU’s
website go directly to the HX Global website. First-time users will need to register and enter the Policy Number JH18492. Members can use the site to access medical and travel safety information.

For more travel information please visit the AAP Student Travel page.

**Field Gear and Packing List**

We will be camping at Bouamir Research Station. The following field gear supply and packing list are required for students.

- [Cameroon Supply/Packing List](#)

**About Your Course**

**Course Structure**

There will be three parts to this class: pre-trip, onsite, and post-trip.

1. **Pre-trip meeting, readings, videos, quiz, and research will take place between December 1, 2019 and January 2, 2020.**
   a. Students will meet via Zoom Meeting for one briefing session on Tuesday, December 10, 2019 from 7:00 PM to 8:30 PM ET, for a pre-departure overview of the course, class syllabus, readings, expectations, logistics, and Helix Global Emergency Briefing.
   b. Some pre-trip readings and videos are required. These are all posted under EReserves and the Pre-Trip Assignments & Readings tab in the Blackboard classroom.
      i. Note: students that have not taken AS.420.611 should read all the chapters listed as EReserves > Prerequisite Ecology Readings.
   c. A quiz about pre-trip readings and materials will be completed before the onsite portion of the course. This quiz will be due by December 30, 2019 at 11:59 PM ET in Blackboard.
   d. Pre-trip research is required. Students will sign up on a first-come-first-served basis for their research topic, and they will present their research informally during the onsite portion of the course.

2. **The onsite portion of the class takes place between Jan 3 and Jan 18, 2020.**
   a. Onsite participation and attendance in all site visits, field stops, excursions, and field methods is required.
   b. Each student will give a 15-minute informal presentation about their pre-trip research topic.
   c. Students are expected to maintain an accurate and organized field notebook of their activities and data collected.
   d. Student mastery of different field methods will be assessed throughout the onsite portion of the course.

3. **The post-trip portion of the class takes place between Jan 19 and Feb 28, 2020.**
   a. After the trip portion concludes, students will have a few weeks to complete a short paper on a customized topic related to their field experience. This paper is due on February 21, 2020 at 11:59 PM ET in Blackboard.
   b. A final reflection journal on the learning gains as a result of the field experience will be due after the trip. This journal assignment is due on February 28, 2020 at 11:59 PM ET in Blackboard.
**Tentative Trip Itinerary (an updated itinerary will be posted in Blackboard)**

The itinerary is subject to changes at any time. Course instructors will inform students of those changes as they occur. Much of our onsite activities are dependent on other stakeholders in Cameroon over which we have little control, thus the itinerary is dynamic and students are expected to be flexible.

This course will be taught during the Johns Hopkins University AAP Winter 2020 Intersession.

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 3, 2020</td>
<td>Arrive in Yaoundé, Cameroon</td>
</tr>
<tr>
<td>January 4-5, 2020</td>
<td>Meet with experts in Yaoundé and visit Ape Action Africa</td>
</tr>
<tr>
<td>January 6, 2020</td>
<td>Drive to Somalomo Research Station</td>
</tr>
<tr>
<td>January 7, 2020</td>
<td>8 hour hike in to Dja Reserve, arrive at Bouamir Research Station</td>
</tr>
<tr>
<td>January 8-15, 2020</td>
<td>Field methods portion of course in and around Bouamir Research Station</td>
</tr>
</tbody>
</table>

During this portion of the course students will be broken into teams and will learn a variety of field techniques:

- Jan 8 – Orientation and Field Safety, Overview of Field Techniques, Setting up Large Mammal Camera Traps
- Jan 9 – Team 1: Field Techniques; Team 2: Auditory surveys of primate vocalizations
- Jan 10 – Team 1: Auditory surveys of primate vocalization; Team 2: Field Techniques
- Jan 11 – Team 1: GPS Work; Team 2: Bird Surveys
- Jan 12 – Team 1: Bird Surveys; Team 2: GPS Work
- Jan 13 – Check Camera Traps; Nocturnal Data Collection
- Jan 14 - Team 1: Insect Collection; Team 2: Mist Netting for Tropical Birds
- Jan 15 - Team 1: Mist Netting for Tropical Birds; Team 2: Insect Collection

| January 16, 2020 | 8 hour hike out of Dja Reserve, arrive at Somalomo Research Station      |

(Note: we will be camping during this time and bathing in rainforest water. There is no running water at Bouamir. Expect field conditions.)
Assessments and Grading Policy

Assignments

Each assignment will be assigned a numerical value out of 10 points. Your final grade is calculated as a weighted average of the total number of points (see below for details). Specific due dates will be located in lesson folders and the course schedule.

Grading

Your cumulative average will be based on the following weighted averages:

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Points</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Trip Quiz</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Attendance and Participation Onsite</td>
<td>10</td>
<td>5%</td>
</tr>
<tr>
<td>Onsite Informal Presentation</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>• Pre-trip research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 15 min informal presentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Deliverables: Facilitated discussion for class AND notes for students on topic</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Field Notes and Notebook</td>
<td>10</td>
<td>10%</td>
</tr>
<tr>
<td>Field Methods Assessment</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Short Paper (due post-trip)</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Final Reflection Journal (due post-trip)</td>
<td>10</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Letter Grade & Percentage

The grading scale for students enrolled for credit is A+ (98% to 100%), A (94% to less than 98%), A- (90% to less than 94%), B+ (88% to less than 90%), B (84% to less than
(88%), B- (80% to less than 84%), C (70% to less than 80%), F (0% to less than 70%).

Pre-Trip Quiz
A single, pre-trip quiz will be used to assess your understanding of the pre-trip readings and/or videos. This quiz will be available for a several day window and will be administered in Blackboard. The quiz must be completed and submitted by December 30, 2019 at 11:59 PM ET.

Attendance and Participation
Students should come on time and be well-prepared for all site visits, field stops, excursions, and field methods. Students are expected to be engaged and ready to ask questions and share thoughts and ideas about the readings as these relate to the sites we will be visiting. As much as possible we will try to have daily briefing and debriefing sessions to discuss what we are being exposed to. See the Attendance and Participation rubric below for guidelines.

<table>
<thead>
<tr>
<th></th>
<th>Developing (20%)</th>
<th>Proficient (60%)</th>
<th>Mastery (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preparation (25%)</strong></td>
<td>Either the readings were not read or they were not understood. Either no questions were asked or poor questions were asked.</td>
<td>Came to discussions with evidence of having given the material a cursory read. Questions were prepared, but they may not stimulate further discussion.</td>
<td>Came to discussions fully prepared with material read and open-ended questions prepared.</td>
</tr>
<tr>
<td><strong>Speaking (25%)</strong></td>
<td>Student is either distracting, overly quiet, or only makes remarks that do not advance discussions.</td>
<td>Student participates but only sometimes offers ideas that move discussions in new directions. Some distracting speech.</td>
<td>Student participates regularly, offering ideas that push the discussion in new directions.</td>
</tr>
<tr>
<td><strong>Listening (25%)</strong></td>
<td>The student may fail to listen or may show no evidence of understanding speakers and his/her classmates. This student may also distract other participants.</td>
<td>The student listens, but he/she may be occasionally off task. Rarely or never refers to points made by classmates.</td>
<td>This student listens attentively, does not distract the other students involved in discussions, and references points made by speakers and classmates when speaking.</td>
</tr>
<tr>
<td><strong>Attendance (25%)</strong></td>
<td>Attends very few of the scheduled site visits, stops, discussions, and associated teamwork.</td>
<td>Attends most scheduled site visits, stops, discussions, and associated teamwork.</td>
<td>Attends all scheduled site visits, stops, discussions, and associated teamwork.</td>
</tr>
</tbody>
</table>

Onsite Informal Presentation
In an effort to promote student engagement and experiential learning, each student will choose a topic related to a specific field trip site or issue. Topic selections will take place
on a first-come-first-served basis via a shared Google document that is emailed to the class on December 2th. Possible topics include:

1. Community based conservation in Central Africa: present issues & future directions
2. Lowland gorillas: conservation status, challenges, and opportunities
3. Baka traditional culture and practices: the role of rainforests like Dja to the Baka way of life & how to support their needs
4. Poaching and the illegal wildlife trade in and around the Congo Basin: who are the buyers and how can we slow demand?
5. Ecology and behavior of the Dja primates
6. Opportunities for long-term research in the Dja Faunal Reserve: where are opportunities for scientific study?
7. Field site infrastructure: ideas for designing a comfortable and environmentally sustainable tropical field station
8. Biodiversity of tropical rainforests – a look at evolution and what drives diversification in the tropics
10. Management of the Dja Faunal Reserve – history and challenges
11. Threats to Congo Rainforest from resource extraction
12. Role of tropical rainforests in climate and impact of climate change on Congo Basin
13. African forest elephant: conservation status, challenges, and opportunities
14. Ecotourism in Cameroon: Impacts, sustainability, benefits, and drawbacks

After choosing topics, students will then research and develop their subject-matter expertise on this topic before the trip and present their findings in a 15-minute presentation onsite between Jan 4 and Jan 18. In addition to the presentation, you must facilitate discussion for the class about the topic AND guide note-taking for students on topic (there is a whiteboard at the field station). The class will take notes in their field notebook. See the Onsite Presentation rubric below for guidelines.

<table>
<thead>
<tr>
<th>Below Expectations (0%)</th>
<th>Novice (33%)</th>
<th>Competent (66%)</th>
<th>Proficient (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research and Content</strong> (50%)</td>
<td>Content was minimal or there were several factual errors.</td>
<td>Included essential information about the topic, but there were 1-2 factual errors</td>
<td>Included essential knowledge about the topic; subject knowledge appears to be good.</td>
</tr>
<tr>
<td><strong>Presentation, Communication, and Facilitated Discussion</strong> (25%)</td>
<td>Delivery was not smooth or nonexistent; presentation disorganized</td>
<td>Delivery was not smooth, but able to maintain interest of audience most of time; presentation organized, but not necessarily logical in progression; very little</td>
<td>Fairly smooth delivery; held audience attention most of time; presentation mostly organized, some connections are not clear; some guided discussion but</td>
</tr>
</tbody>
</table>
### Field Notes and Notebook

Describing, recording, and drawing field observations represent the first steps of field-based scientific inquiry and creativity. These observations fuel description ("what" questions), hypothesis testing ("why" and "how" questions), experimental design, and ultimately management decisions. A field notebook, where notes on such observations are recorded, is a naturalist's most important and least expensive tool that should be used daily. Thus, students will be honing this skill and keeping their own field notebook for the duration of the onsite portion of our class. Student notebooks will be collected on the evening of January 16 for grading using the Field Notebook rubric below.

<table>
<thead>
<tr>
<th>Guided Note-Taking (25%)</th>
<th>Developing (25%)</th>
<th>Proficient (60%)</th>
<th>Mastery (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No guidance with note taking; Did not utilize whiteboard or other means to convey information; disorganized</td>
<td>Independent observations lacking; little analysis or interpretation of natural world present.</td>
<td>Notebook contains infrequent independent observations; analysis and/or interpretations present but not detailed.</td>
<td>Notebook contains continuous, detailed, independent observations of the natural world that support rigorous analysis and sophisticated interpretation. Text clearly separates observation from analysis and interpretation.</td>
</tr>
<tr>
<td>Very little guidance with note-taking; Very little whiteboard use or other means to convey information; Information is still largely disorganized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some guidance with note-taking; Some whiteboard use or other means to convey information; Information is somewhat organized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear guidance with note-taking; Used whiteboard or other means to convey information clearly; Information presented in an organized manner</td>
<td></td>
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</tr>
</tbody>
</table>

### Field Notebook Rubric

- **Guided Note-Taking**
  - **Developing (25%)**: Little or no guidance with note-taking; Did not utilize whiteboard or other means to convey information; disorganized.
  - **Proficient (60%)**: Some guidance with note-taking; Some whiteboard use or other means to convey information; Information is somewhat organized.
  - **Mastery (100%)**: Clear guidance with note-taking; Used whiteboard or other means to convey information clearly; Information presented in an organized manner.

- **Field Notes and Notebook**
  - **Developing (20%)**: Rarely or never identifies source.
  - **Proficient (60%)**: Intermittently identifies source.
  - **Mastery (100%)**: Clearly identifies source of information for all entries (visiting lecturers, reference books, independent observations).
<table>
<thead>
<tr>
<th>Will the notebook be useful as a natural history reference? (30%)</th>
<th>Includes both verbal and visual descriptions (20%)</th>
<th>Overall Aesthetic (10%)</th>
<th>Field Methods Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong> (titles/labels)</td>
<td>Species lists lacking or incomplete; no independent sightings of either new species or new behavior.</td>
<td>One mode or another (visual or verbal) largely absent from notebook.</td>
<td><strong>Students will be learning a variety of field methods throughout the onsite portion of the course. They are expected to participate in and learn the proper protocol for all field methods covered, including but not limited to GPS work, camera traps, mist netting, auditory primate surveys, bird surveys, butterfly traps, nocturnal insect surveys, etc. Of those methods covered, students will be assessed on their development over the course of the onsite portion of the course and whether or not they progress from developing to progressing to eventual mastery. Effective mastery of these techniques requires focus, practice, and a willingness to learn from mistakes and maturity to work well with your team members in rough situations.</strong></td>
</tr>
<tr>
<td><strong>Consistency</strong></td>
<td>Consistent lack of organization, missing page numbers or table of contents, few labels.</td>
<td>Many entries use only one form of recording.</td>
<td><strong>Students will be learning a variety of field methods throughout the onsite portion of the course. They are expected to participate in and learn the proper protocol for all field methods covered, including but not limited to GPS work, camera traps, mist netting, auditory primate surveys, bird surveys, butterfly traps, nocturnal insect surveys, etc. Of those methods covered, students will be assessed on their development over the course of the onsite portion of the course and whether or not they progress from developing to progressing to eventual mastery. Effective mastery of these techniques requires focus, practice, and a willingness to learn from mistakes and maturity to work well with your team members in rough situations.</strong></td>
</tr>
<tr>
<td><strong>Format</strong> (minimum data for each entry, Latin names underlined, etc.)</td>
<td>Not present.</td>
<td>Notebook easy to read and engaging but no obvious sign of extra effort.</td>
<td><strong>Students will be learning a variety of field methods throughout the onsite portion of the course. They are expected to participate in and learn the proper protocol for all field methods covered, including but not limited to GPS work, camera traps, mist netting, auditory primate surveys, bird surveys, butterfly traps, nocturnal insect surveys, etc. Of those methods covered, students will be assessed on their development over the course of the onsite portion of the course and whether or not they progress from developing to progressing to eventual mastery. Effective mastery of these techniques requires focus, practice, and a willingness to learn from mistakes and maturity to work well with your team members in rough situations.</strong></td>
</tr>
<tr>
<td></td>
<td>Format lacking.</td>
<td></td>
<td><strong>Students will be learning a variety of field methods throughout the onsite portion of the course. They are expected to participate in and learn the proper protocol for all field methods covered, including but not limited to GPS work, camera traps, mist netting, auditory primate surveys, bird surveys, butterfly traps, nocturnal insect surveys, etc. Of those methods covered, students will be assessed on their development over the course of the onsite portion of the course and whether or not they progress from developing to progressing to eventual mastery. Effective mastery of these techniques requires focus, practice, and a willingness to learn from mistakes and maturity to work well with your team members in rough situations.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Most dominant taxa noted; few independent sightings or behavior of species not mentioned by instructor.</th>
<th>Complete list of major taxa (birds, plants and other interesting natural history) detailed for each location visited. Behavior (phenology, interactions) also noted.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization generally clear, a few entries ambiguous or observations mislabeled.</td>
<td>Clearly identifies location of observation, all pages numbered with a table of contents.</td>
</tr>
<tr>
<td>Mostly consistent.</td>
<td>Uniform throughout notebook.</td>
</tr>
<tr>
<td>Inconsistent standard.</td>
<td>Maintains high standard of formatting throughout notebook.</td>
</tr>
</tbody>
</table>

**Notebook includes ample examples of natural history phenomena recorded in BOTH visual and verbal descriptions. Drawings and diagrams used throughout notebook.**
Short Paper (post-trip)

After the onsite portion of the course concludes, you will be composing a short paper as a culminating work to weave together major themes that emerge during your field experience. Given the range of student backgrounds in this course, you can choose between one of the two types of papers:

1) Proposal paper
   - Students will compose a paper arguing that a particular proposal or idea is warranted with respect to wildlife conservation. The key is to lay out a case for what has been done in the past (background), what needs to be done now or in the future (proposal), why this needs to be done and what will happen as a result of it (analysis), then provide a summary and end with a strong call for action. This paper builds on idea that came from your field experience.

2) Science journalism piece
   - Students will compose a science journalism article for an intended science medium (please identify the medium – i.e. National Geographic magazine, etc.). The topic builds on a theme or issue touched on in your field experience.

Recommended length: 5 single spaced pages. Additional assignment requirements are posted in Blackboard.

Students will submit a description of the topic they will be writing about at the conclusion of the field portion of the course to the professors. A final draft of the paper will be submitted via Turnitin and shared with the class in the discussion area by February 21, 2020 at 11:59 pm ET. We encourage students to consider having their papers published and are happy to assist with the process. See the Short Paper rubric below for guidelines.
For your last assessment, you will be composing a Final Reflective Journal about your learning gains throughout the intensive field experience. Do be honest in this journal, as the reflection is for you, not for us. Research into learning and development shows that meta-cognitive reflection (thinking about one’s thinking in order to grow) helps learners to reinforce new knowledge and to build on it. In the past, we’ve had a few students respond to this assignment by writing what they think that we want to hear, but we reiterate: this is for you, not us. We figure, at the end of an intense trip, reflecting on what you’ve learned, how that fits into your interests as a scholar-practitioner of wildlife conservation, and what you plan to do with that knowledge is a better exercise than having you take a Final Exam (I expect that you agree, right?).

Now, if you are tired of writing because you are also wrapping up your Short Paper and you would rather make a Final Reflective video or audio file instead with you talking and not writing, you are welcome to do that instead and upload the audio or video file to Blackboard.

The Final Reflective Journal is due on February 28, 2020 at 11:59 pm ET. The following rubric is used for the Final Reflective Journal.

<table>
<thead>
<tr>
<th>Critical Thinking (33% weight)</th>
<th>Below Expectations</th>
<th>Novice</th>
<th>Competent</th>
<th>Proficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0%) Rudimentary and superficial; little analysis, synthesis, or evaluation; little or no</td>
<td>(33%) Information is thin and commonplace; attempts made at analysis, synthesis, and evaluation;</td>
<td>(66%) Substantial information; evidence of analysis, synthesis, and evaluation;</td>
<td>(100%) Rich in content; insightful analysis, synthesis, and evaluation; clear connections</td>
<td></td>
</tr>
</tbody>
</table>
connections with material or is off topic | evaluation; connections are limited, vague generalities are posted | general connections are made, but are sometimes too obvious or not clear | made to real-life situations or to previous content

| Personal Reflection (34% weight) | (0%) Lack of connection to personal life | (33%) Little evidence of personal connection; many connections need further explanation or justification | (66%) Connects ideas and thoughts to personal life; evidence of personal connection to learning, community | (100%) Entry is high quality consisting of personal reflections that draw connection between real-life, learning, and reading |

| Grammar, Style, Organization of Thoughts (33% weight) | (0%) Obvious grammatical or stylistic errors; errors make content very difficult to read; no citation style used; disorganized | (33%) Obvious grammatical or stylistic errors; errors interfere with content; citation style used but either not APA or attempted APA with many errors; somewhat disorganized | (66%) Few grammatical or stylistic errors; APA citation style used with some errors; thoughts were generally organized but some rambling | (100%) An occasional grammatical or stylistic error; APA citation style used with few errors; well organized |

Assignment Guidelines

How should assignments be submitted?

Assignment directions will indicate where assignments will be posted (e.g. to an assignment submission link or in person). If submitting documents for an assignment, please specify the assignment name in the document title. When creating files, include your name and the name of the assignment in the file title. Also, please be sure to only include one period in file names. The period should be between the file name and the extension. Use underscores instead of spaces in file names (Blackboard doesn’t like spaces). For example: jdarosa_assignment1.docx. Acceptable file submission formats are DOCX and PDF, unless otherwise stated.

APA Formatting and Style. All papers and quizzes must use APA citation style to credit sources. Papers must also be formatted according to APA guidelines.

Turnitin. The Short Papers will be submitted using Turnitin, an educational tool that helps identify and prevent plagiarism from Internet resources. You will be required to submit your paper electronically using the Turnitin link after the onsite portion of the class. You do not need a Turnitin account. Your assignment will be assigned an originality score and report which you and your professors will be able to see. You are allowed to submit your paper multiple times up to the due date, and your professors will grade the last submission by default. To learn more about Turnitin, go to http://turnitin.com/.

When will assignments be due?
Assignment and activity due dates are listed in this syllabus. Dr. da Rosa and/or Professor Houlihan will announce changes in the online classroom via the announcements tool. Some larger assignments will be completed over several weeks.

When will completed assignments be returned?
Dr. da Rosa and/or Professor Houlihan will aim to return assignments to you within 5-7 days following the due date, depending on the length of the assignment. You will receive feedback under the My Grades link in the left-hand menu of your course.

What is the policy for late assignments?
You are expected to contact Dr. da Rosa in advance if you think you cannot meet an assignment deadline. However, if an assignment is late and prior arrangements have not been made with Dr. da Rosa, the assignment score will be marked zero. No exceptions.

University Policies

This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

Students with Disabilities

Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the Disability Accommodations page. Further information and a link to the Student Request for Accommodation form can also be found on the Disability Accommodations page.

Ethics & Plagiarism

JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor. Read and adhere to JHU’s Notice on Plagiarism.

Dropping the Course

You are responsible for understanding the university’s policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the Academic Calendar and the field course schedule.

Getting Help

You have a variety of methods to get help on Blackboard. Please consult the resource listed in the “Blackboard Help” link for important information. If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the AAP online support page. Also, contact your instructor at the email address listed in the syllabus.
**Copyright Policy**

All course material are the property of JHU and are to be used for the student's individual academic purpose only. Any dissemination, copying, reproducing, modification, displaying, or transmitting of any course material content for any other purpose is prohibited, will be considered misconduct under the JHU Copyright Compliance Policy, and may be cause for disciplinary action. In addition, encouraging academic dishonesty or cheating by distributing information about course materials or assignments which would give an unfair advantage to others may violate AAP's Code of Conduct and the University's Student Conduct Code. Specifically, recordings, course materials, and lecture notes may not be exchanged or distributed for commercial purposes, for compensation, or for any purpose other than use by students enrolled in the class. Other distributions of such materials by students may be deemed to violate the above University policies and be subject to disciplinary action.

**Code of Conduct**

To better support all students, the Johns Hopkins University non-academic Student Conduct Code has been integrated and updated to include all divisions of the University. In addition, it is important to note that all AAP students are still accountable for the Code of Conduct for Advanced Academic Programs.

**Title IX**

**Confidentiality and Mandatory Reporting**

As an instructor, one of my responsibilities is to help create a safe and inclusive learning environment on our campus. I also have mandatory reporting responsibilities related to my role as a Responsible Employee under the Sexual Misconduct Policy & Procedures (which prohibits sexual harassment, sexual assault, relationship violence and stalking), as well as the General Anti-Harassment Policy (which prohibits all types of protected status based discrimination and harassment). It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep information you share private to the greatest extent possible. However, I am required to share information that I learn of regarding sexual misconduct, as well as protected status based harassment and discrimination, with the Office of Institutional Equity (OIE). For a list of individuals/officials who can speak with you confidentially, please see Appendix B of the JHU Sexual Misconduct Policies and Laws.

For more information on both policies mentioned above, please see: JHU Relevant Policies, Codes, Statements and Principles. Please also note that certain faculty and other University community members also have a duty as a designated Campus Safety Authority under the Clery Act to notify campus security of certain crimes, as well as a duty under State law and University policy to report suspected child abuse and/or neglect.