

## **BIOA 413: Human-Primate Interface: Implications for Disease Risk and Conservation**

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Fall 2017      Tues and Thurs 2:30- 4:20 Denny Hall Rm 212

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Office Hrs: 1-2:23pm Tu-Th in Denny Hall Rm 128

Course Webpage: <https://canvas.uw.edu/courses/1159537>

A growing literature suggests that cross-species transmission of infectious agents occurs between humans and several nonhuman primate species in a variety of contexts and in diverse geographic areas. Whether cross-species transmission occurs depends on a number of factors, including the prevalence of infectious agents present in the human and primates reservoirs, the contexts of interspecies contact, and the frequency and type of contact that occurs. This course is a multidisciplinary approach to exploring the interrelationship of human and primate populations. We will delve into the challenges of mitigating the impact of primate-borne infectious diseases on public health as well as conserving free-ranging primate populations in the 21st century.

This is a seminar course which will rely heavily on primary literature drawn from diverse fields. Each week during the quarter we will cover a different topic, all of which are interrelated and span multiple disciplines.

BioA413 is a new course and I am expecting that students will have a wide range of experience with the topics that we will be covering. To facilitate learning, as well as to mirror the reality of working at the human-primate interface, groups composed of students with complimentary backgrounds/skills will be established. The fullest understanding of the diverse material presented in this class requires a collaborative discourse. Therefore, it is imperative that students come to each class prepared to participate in discussions. This means that students will have read, annotated and thought carefully about readings before class starts.

### **Learning Objectives: By the end of this course students will have**

- 1) A working knowledge of course related aspects of:
  - a. Primate zoonoses
  - b. Anthroponoses
  - c. Diverse contexts of the human-primate interface
- 2) The capacity to discuss and critically analyze how both human and primate behavior and ecology influences the transmission of infectious agents across the increasingly porous human-primate interface
- 3) An understanding of the conservation management techniques and tools that are being used to reduce the risk of bi-directional disease transmission
- 4) The ability to critically read, analyze and synthesize primary literature from a variety of disciplines

**Text:** There is one required book for this course: *Spillover* by David Quammen. There will be dozens of additional primary literature readings that will be assigned throughout the course. These will be made available as PDFs on the course website. I STRONGLY encourage you to print these out on a weekly basis.

**Weekly Primate and Pathogen reports turned handed in every Tuesday at the start of class:** There are more than 500 species of primates and 1000's of infectious agents! During this course, we will only be able to discuss a fraction of the extraordinary diversity of primates and pathogens that are present at the human-primate interface. For you to get exposure to a broader array of primates and pathogens you will need to do some research outside of class to fill in a form that is available on the course website and that asks for:

**Genus; species; common name; geographic distribution; characteristics of the interface and 2 interesting facts** about any primate of your choice.

**Common name; mode of transmission; geographic distribution; manifestations in humans; manifestations in primates and 2 interesting facts** about any pathogen of your choice.

Do not give me the same species or pathogen twice during the course. I will not accept any late reports.

**Article Critical Analysis due every Thursday before the start of class:** Each week you will find and critically analyze an article related to the topic that we are focusing on that week. Use the Template for Taking Notes on Primary Literature that is on the course website. **Do not rely on popular media articles**—use only primary literature. Links to online resources for primates, pathogens and primary literature relevant to this course are found on the course's Canvas website under the **Library Guide for BIOA413 link**. Your article must be about an infectious agent that is being studied in primates (captive, pet, laboratory, zoo, wild, performing, sanctuary, etc).

**Quizzes:** 4 pop quizzes will be administered during the quarter. These quizzes will be cumulative and will cover the readings and lectures.

**Midterm: Due November 9, 2017 at 2:30pm**

Each student will identify a topic (preferably other than one of those being covered during the course) then select and critically read and analyze 5 sources of primary literature (e.g. peer-reviewed research (not review) articles, not popular media articles). 1000-1500 words. No late papers will be accepted.

*Below are just a few topic ideas:*

Emerging and reemerging pathogens in lab primates; Role of anthropogenic activities on disease transmission; Rabies; Filoviruses; Herpes B; Primates as pets in the USA; Primate rehabilitation/sanctuaries; Role of cultural transmission (primate and/or human) on disease transmission; Primates in Folk medicine; Yellow fever; Dengue; Scabies; Temple monkeys; bushmeat hunting in Africa; bushmeat hunting in South America; global distribution of bushmeat hunting; crop-raiding at the human-primate interface; primates as pets in habitat countries; urban primates; primate self-medication; historical and contemporary international trade of primates.

Students are encouraged to make use of the Department of Anthropology's writing center for guidance on improving their writing skills. The Anthropology Writing & Research Center (AWRC) provides assistance and support with composition, rhetoric, and other writing skills to Anthropology undergraduates and graduate students. They can help you improve writing assignments you may have, enhance your writing and research skills in general, and increase your comfort with the both the writing and research processes. AWRC provides assistance at all points in research and writing, from brainstorming ideas to outlining to specific skills (e.g. writing effective introductions, evaluating arguments, proper citation and referencing, etc.). We also have a number of useful reference materials for your perusal. You can make an appointment with us, or walk in during our office hours in Denny 423. Further details about making appointments, AWRC hours, appointment length, and center policies can be found at the URL below. If you have any questions, feel free to email the AWRC at [anthwrc@uw.edu](mailto:anthwrc@uw.edu). Center Website: <https://catalyst.uw.edu/workspace/anthwrc/33110/>

**Group Presentation:**

During the last week of class each group will present a 30 minute, multidisciplinary lecture on a topic that is relevant to the human-primate interface. More information about these projects will be forthcoming.

**Grades will be assigned the grade-point equivalent based upon your overall score.** You can find UW's standard grade chart at [http://www.washington.edu/students/gencat/front/Grading\\_Sys.html](http://www.washington.edu/students/gencat/front/Grading_Sys.html).

Primate and pathogen reports: 10 points =	100 pts
Weekly article critical analysis: 10 points each=	100 pts
Midterm: 50 points=	50 pts
Quizzes: 10 points=	40 pts
Final group presentation: 100 points=	<u>100 pts</u>
	<b>390 pts possible</b>

Date	Topic
<b>Week 1</b> <b>9/28</b>	<b><i>Introduction: We are all Primates</i></b> <b><i>Library resources; group exercises</i></b>
<b>Week 2</b> <b>10/3 and 10/5</b>	<b><i>Ethnoprimatology</i></b> <b><i>Infectious Disease Primer</i></b>
<b>Week 3</b> <b>10/10 and 10/12</b>	<b><i>Human-Primate Interfaces:</i></b> <b><i>Wild primates; Bushmeat Hunting; Urban primates</i></b>
<b>Week 4</b> <b>10/17 and 10/19</b>	<b><i>Human-Primate Interfaces:</i></b> <b><i>Pets, Sanctuaries, Biomedical Research</i></b>
<b>Week 5</b> <b>10/24 and 10/26</b>	<b><i>One Health:</i></b> <b><i>Spillover by David Quammen</i></b>
<b>Week 6</b> <b>10/30 and 11/2</b>	<b><i>Filoviruses</i></b>
<b>Week 7</b> <b>11/7 and 11/9</b>	<b><i>Tuberculosis</i></b>
<b>Week 8</b> <b>11/14 and 11/16</b>	<b><i>Retroviruses</i></b>
<b>Week 9</b> <b>11/21 and NO Class 11/23</b>	<b><i>Malaria and Vector-borne diseases</i></b>
<b>Week 10</b> <b>11/28 and 11/30</b>	<b><i>Gastrointestinal Pathogens</i></b>
<b>Week 11</b> <b>12/5 and 12/7</b>	<b><i>Group Presentations</i></b>