

University of Florida
College of Public Health & Health Professions Syllabus
PHC 6519: Zoonotic Diseases in Humans and Animals (3 credit hours)

Summer: 2016
 Delivery Format: Online
 elearning.ufl.edu (UF elearning)

Instructor Name: Dr. Traci Krueger
 Phone Number: 352-280-0121
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 Office Hours: By appointment
 Preferred Course Communications (e.g. email, office phone): Canvas Inbox

Prerequisites

There are no course prerequisites.

PURPOSE AND OUTCOME

Course Overview

The purpose of this online course is to introduce graduate and professional students to major zoonotic diseases. We will discuss both the human and animal presentations, epidemiology, means of prevention and control, available diagnostics, available treatments, and associated human and animal regulations for each disease. The diseases presented in class will be chosen based on their significance to public health practitioners.

The course is organized by etiologic agents of disease. There are 15 modules that must be completed by the deadlines provided on the schedule. Each module has an online timed quiz and an assignment.

Relation to Program Outcomes

This course provides primary gains or reinforcement of the following competencies:

- Describing genetic, physiological and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards
- Specifying approaches for assessing, preventing, and controlling environmental hazards that pose risks to human health and the environment
- Demonstrating ability to analyze and interpret epidemiologic data
- Applying epidemiologic knowledge and methodology in a substantive area or applied setting

Course Objectives and/or Goals

Upon successful completion of the course, students should be able to:

1. Recognize and understand the zoonotic potential of presented diseases
2. Understand the epidemiology of zoonotic diseases that are of great public health concern
3. Describe the importance of zoonotic diseases in public health
4. Describe the route(s) of transmission of major zoonotic diseases
5. List significant public health successes regarding zoonotic diseases (and explain why they were successful)
6. Cite individual and population prevention and control methods for major zoonotic diseases
7. List populations that are particularly vulnerable to specific zoonotic diseases discussed in the course
8. Summarize the differences, in prevalence and risk, regarding zoonotic diseases in developed vs. developing countries (and the reasons for these differences)

Instructional Methods

- Required Text: Handbook of Zoonoses: Identification and Prevention by J. L. Colville and D. L. Berryhill. 2007 ISBN: 978-0-323-04478-3, Approximate cost: \$45
- Recommended text: Human-Animal Medicine: Clinical Approaches to Zoonoses, Toxicants and Other Shared Health Risks by Rabinowitz and Conti. 2009 ISBN: 978-1416068372
- Lectures: These are for general orientation.

- Readings and Resources: In addition to the required text, supplementary readings and resources may be posted in the course. The reading list may be supplemented during the course.
- Assessments: Assignments and quizzes will be used to assess student progress.

What is expected of you?

You are expected to actively engage in the course throughout the semester. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule

Module Outline

| | |
|-----------|---|
| Module 1 | Principles of Zoonoses |
| Module 2 | Viral Diseases: Rabies, AIDS |
| Module 3 | Viral Diseases: Eastern Equine Encephalitis, Western Equine Encephalitis, St. Louis Encephalitis, La Crosse Encephalitis, West Nile Virus |
| Module 4 | Viral Diseases: Influenza, Hantavirus, Lymphocytic Choriomeningitis, Monkeypox |
| Module 5 | Bacterial Diseases: Rat-bite fever, Staphylococcosis, Vibriosis, Yersiniosis |
| Module 6 | Bacterial Diseases: Anthrax, Cat Scratch Disease, Leptospirosis |
| Module 7 | Bacterial Diseases: Tuberculosis, Brucellosis |
| Module 8 | Bacterial Diseases: Pasteurellosis, Psittacosis, Listeriosis, Q Fever |
| Module 9 | Bacterial Diseases: Campylobacteriosis, Colibacillosis, Salmonellosis, Botulism |
| Module 10 | Vector Borne Bacterial Diseases: Lyme Disease, Rocky Mountain Spotted Fever, Ehrlichiosis |
| Module 11 | Vector Borne Bacterial Diseases: Leishmaniasis, Plague, Tularemia |
| Module 12 | Parasitic Diseases: Round Worm Infections, Tapeworm Infections, Trichinosis |
| Module 13 | Parasitic Disease: Protozoans: Babesiosis, Cryptosporidiosis, Giardiasis, Toxoplasmosis |
| Module 14 | Parasitic Diseases: Arthropod Infestations; and Fungal Diseases: Dermatophytosis |
| Module 15 | TSEs: BSE, Chronic Wasting Disease, Scrapie |

| Module | Topics | Text Book Pages | Additional Reading & Presentations | Quiz and Assignment Due Date* |
|---------------------------|---|---|--|--|
| 1 | Principles of Zoonoses | 2-13 | 1. Powerpoint Presentation – Intro to Zoonotic Dzs; 2. Childs Article: EID Vol 4 No 3 July-Sept 1998 “Emerging Zoonoses” www.cdc.gov/ncidod/EID/vol4no3/childs.htm 3. Online Video Clip: National Geographic “Deadly Contact: How Animals and Humans Exchange Disease” http://ngm.nationalgeographic.com/2007/10/infectious-animals/multimedia-interactive | 11:59PM Wednesday, August 3, 2016 |
| Viral Diseases | | | | |
| 2 | Rabies, AIDS | 142-147 | 1. Powerpoint - Rabies 2. Article: Science. 2000 Jan 28;287(5453):607-14 “AIDS as a zoonosis: scientific and public health implications” | 11:59PM Wednesday, August 3, 2016 |
| 3 | Encephalitides: Eastern Equine Encephalitis, Western Equine Encephalitis, St. Louis Encephalitis, La Crosse Encephalitis, West Nile Virus | 73-76; 219-222; 163-166; 100-102; 215-218 | 1. Article: Clin Med Res, 2003 Jan; 1:1; 5-12 “Birds, Migration, and Emerging Zoonoses: West Nile Virus, Lyme Disease, Influenza A, and Enteropathogens” | 11:59PM Wednesday, August 3, 2015 |
| 4 | Influenza, Hantavirus, Lymphocytic Choriomeningitis, Monkeypox | 96-99; 87-90; 120-122 | 1. Article: Lancet Infect Dis. 2004 Jan;4(1):15-25 “Human monkeypox: an emerging zoonosis.” | 11:59PM Wednesday, August 3, 2016 |
| Bacterial Diseases | | | | |
| 5 | Rat-bite fever, Staphylococcosis, Vibriosis, Yersiniosis | 148-149; 179-181; 211-214; 223-226 | | 11:59PM Wednesday, August 3, 2016 |
| 6 | Anthrax, Cat Scratch Disease, Leptospirosis | 16-21; 49-53; 103-107 | | 11:59PM Wednesday, August 3, 2016 |
| 7 | Tuberculosis, Brucellosis | 123-126; 38-43 | 1. Powerpoint – Tuberculosis and Brucellosis 2. Rodwell article: EID Vol 14, No 6 June 2008 “Tuberculosis from <i>M. bovis</i> in Binational Communities, United States” www.cdc.gov/EID/content/14/6/909.htm | 11:59PM Wednesday, August 3, 2016 |
| 8 | Pasteurellosis, Psittacosis, Listeriosis, Q Fever | 127-129; 135-138; 108-113 | | 11:59PM Wednesday, August 3, 2016 |

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|---|---|---|---|--|
| | | 139-141 | | |
| 9 | <i>Campylobacteriosis, Colibacillosis, Salmonellosis, Botulism</i> | 44-48; 54-58; 167-172; 28-34; 231 | | 11:59PM Wednesday, August 3, 2016 |
| 10 | <i>Vector Borne: Lyme Disease, Rocky Mountain Spotted Fever, Ehrlichiosis</i> | 114-119; 150-154; 77-82; 227-230 | | 11:59PM Wednesday, August 3, 2016 |
| 11 | <i>Vector Borne: Leishmaniasis, Plague, Tularemia</i> | 130-134; 205-210 | 1. Powerpoint – Leishmaniasis 2. Desjeux Article: <i>Roy Soc Trop Med & Hygiene, 2001</i> “The Increase in Risk Factors for Leishmaniasis Worldwide” www.who.int/leishmaniasis/burden/en/ | 11:59PM Wednesday, August 3, 2016 |
| Internal Parasitic Diseases | | | | |
| 12 | <i>Roundworm Infections, Tapeworm Infections, Trichinosis</i> | 91-95; 155-162; 182-192; 200-204 | 1. Article: <i>CDC Guidelines for Veterinarians: Prevention of Zoonotic Transmission of Ascarids and Hookworms of Dogs and Cats</i> www.cdc.gov/ncidod/dpd/parasites/ascaris/prevention.htm | 11:59PM Wednesday, August 3, 2016 |
| 13 | <i>Protozoans: Babesiosis, Cryptosporidiosis, Giardiasis, Toxoplasmosis</i> | 22-27; 59-63; 83-86; 193-199 | | 11:59PM Wednesday, August 3, 2016 |
| External Parasites, Fungal, and Prion Diseases | | | | |
| 14 | <i>Arthropod Infestations (Scabies), Dermatomycosis</i> | 173-178; 64-72 | | 11:59PM Wednesday, August 3, 2016 |
| 15 | <i>Bovine Spongiform Encephalopathy, Chronic Wasting Disease, Scrapie</i> | 35-37 | 1. Powerpoint – TSEs 2. Belay Article: <i>EID Vol 10, No 6, June 2004</i> “Chronic Wasting Disease and potential transmission to humans” www.cdc.gov/ncidod/EID/vol10no6/03-1082.htm | 11:59PM Wednesday, August 3, 2016 |

* 5 points extra credit will be given if all 15 assignments are turned in at least two weeks prior to the final due date. This extra credit option applies for assignments only, not quizzes (ie. quizzes can be completed early also, however no extra credit will be offered for early completion of quizzes).

Early turn in deadline for receiving extra credit: 11:59PM, Wednesday, July 20, 2016

Discussion boards will be available for discussion of topics pertinent to the course. Postings are voluntary.

For those of you interested in emerging infectious diseases, the following books may be of interest. (They are not required readings for this course).

- “The Coming Plague: Newly Emerging Diseases in a World Out of Balance” by Laurie Garrett

- “The Demon in the Freezer” by Richard Preston
- “The Hot Zone” by Richard Preston
- “Virus Hunter: Thirty Years of Battling Hot Viruses Around the World” by C. J. Peters
- “Ebola” by William Close
- “Deadly Feasts: Tracking the Secrets of a Terrifying New Plague” by Richard Rhodes
- “Mountains Beyond Mountains” by Tracy Kidder
- “Spillover: Animal Infections and the Next Human Pandemic” by David Quammen

Course Materials and Technology

For technical support for this class, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://elearning.ufl.edu/help.shtml>

ACADEMIC REQUIREMENTS AND GRADING

Assignments

Quizzes.

- There are 15 quizzes and each is worth 15 points.
- Quizzes will be timed and may only be taken once
- Each quiz has 15 questions, multiple choice and true/false.
- You will have 15 minutes to take each quiz.
- Questions and answers will be available for student review after the deadline for completion/submission has passed.

Assignments

- There are 15 assignments worth 15 points each.
- Please follow the instructions carefully and cite all sources.

The quizzes and assignments are equally weighted and each will comprise 3.33% of your final grade.

Grading

| <u>Requirement</u> | <u>% of final grade</u> | <u>Points</u> |
|-----------------------------------|---------------------------|-------------------------------|
| Quizzes (15 total) | 3.33% each (50% total) | 15 points each (225 Total) |
| Assignments (15 total) | 3.33% each (50% total) | 15 points each (225 Total) |

Point System Used

| | | | | | | | | | | | | |
|---------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------|
| % earned | 90% - 100% | 87% - 89% | 83% - 86% | 80% - 82% | 77% - 79% | 73% - 76% | 70% - 72% | 67% - 69% | 63% - 66% | 60% - 62% | 57% - 59% | <57% % |
| Letter Grade | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | D- | E |

Please be aware that a C- is not an acceptable grade for graduate students. In addition, a grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A.

| Letter Grade | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | D- | E | WF | I | NG | S-U |
|--------------|-----|------|------|-----|------|------|-----|------|------|-----|------|-----|-----|-----|-----|-----|
| Grade Points | 4.0 | 3.67 | 3.33 | 3.0 | 2.67 | 2.33 | 2.0 | 1.67 | 1.33 | 1.0 | 0.67 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:

<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Policy Related to Make up Exams or Other Work

Personal issues with regard to fulfillment of course requirements will be handled on an individual basis. Late submissions will not be accepted without instructor approval prior to the submission deadline.

Please note: Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance

All faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

Students are expected to behave with courtesy befitting a professional student.

Communication Guidelines

Student-Instructor communication will be primarily via the elearning course site—this may be by course mail, assignment comment section, announcements, or discussion board. Students may also contact the instructor directly by email (kruegert@ufl.edu) or via phone (352 280-0121 between the hours of 8:00 AM and 7:00 PM EST).

Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Online Faculty Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:
Alachua County Crisis Center
(352) 264-6789
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.