

University of Florida
College of Public Health & Health Professions Syllabus
PHC6519: Zoonotic Diseases in Humans and Animals (3 credit hours)
Summer 2020
 Delivery Format: e-Learning in Canvas

Instructor Name: Dr. Traci Krueger
 Phone Number: Cell 352-280-0121
 Email Address: kruegert@ufl.edu
 Office Hours: By appointment

Preferred Course Communications: Email: via Canvas Inbox to “Teachers”

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: \$50. Currently text is only available in ebook format and used hard copies. See Canvas site for information on ebook format.

- 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. Cutler Article: EID Vol 16 No 1 Jan 2010 “Public Health Threat of New, Reemerging, and Neglected Zoonoses in the Industrialized World” | 11:59PM Wednesday, Aug 12, 2020 |
| 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, Aug 12, 2020 |
| 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, Aug 12, 2020 |
| 4 | Influenza, Hantavirus, Lymphocitic 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, Aug 12, 2020 |
| Bacterial Diseases | | | | |
| 5 | Rat-bite fever, Staphylococcosis, Vibriosis, Yersiniosis | 148-149; 179-181; 211-214; 223-226 | | 11:59PM Wednesday, Aug 12, 2020 |
| 6 | Anthrax, Cat Scratch Disease, Leptospirosis | 16-21; 49-53; 103-107 | | 11:59PM Wednesday, Aug 12, 2020 |
| 7 | Tuberculosis, Brucellosis | 123-126; 38-43 | 1. Powerpoint – Tuberculosis and Brucellosis 2. Rodwell article: EID Vol 14, No 6 June 2008 “ Tuberculosis from M. bovis in Binational Communities, United States ” | 11:59PM Wednesday, Aug 12, 2020 |
| 8 | Pasteurellosis, Psittacosis, Listeriosis, Q Fever | 127-129; 135-138; 108-113 139-141 | | 11:59PM Wednesday, Aug 12, 2020 |

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|---|---|---|--|--|
| 9 | <i>Campylobacteriosis, Colibacillosis, Salmonellosis, Botulism</i> | 44-48; 54-58; 167-172; 28-34; 231 | | 11:59PM Wednesday, Aug 12, 2020 |
| 10 | <i>Vector Borne: Lyme Disease, Rocky Mountain Spotted Fever, Ehrlichiosis</i> | 114-119; 150-154; 77-82; 227-230 | | 11:59PM Wednesday, Aug 12, 2020 |
| 11 | <i>Vector Borne: Leishmaniasis, Plague, Tularemia</i> | 130-134; 205-210 | 1. Powerpoint – Leishmaniasis 2. Desjeux Article: <i>Roy Soc Trop Med & Hygeine, 2001</i> “The Increase in Risk Factors for Leishmaniasis Worldwide” | 11:59PM Wednesday, Aug 12, 2020 |
| Internal Parasitic Diseases | | | | |
| 12 | <i>Roundworm Infections, Tapeworm Infections, Trichinosis</i> | 91-95; 155-162; 182-192; 200-204 | 1. Article: CDC Guidelines for Veterinarians: Prevention of Zoonotic Transmission of Ascarids and Hookworms of Dogs and Cats | 11:59PM Wednesday, Aug 12, 2020 |
| 13 | <i>Protozoans: Babesiosis, Cryptosporidiosis, Giardiasis, Toxoplasmosis</i> | 22-27; 59-63; 83-86; 193-199 | | 11:59PM Wednesday, Aug 12, 2020 |
| External Parasites, Fungal, and Prion Diseases | | | | |
| 14 | <i>Arthropod Infestations (Scabies), Dermatophytosis</i> | 173-178; 64-72 | | 11:59PM Wednesday, Aug 12, 2020 |
| 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” | 11:59PM Wednesday, Aug 12, 2020 |

* Text book pages are listed for the printed book. Ebook pages will vary based on the configuration of the platform in which you are reading it. Book chapters are not numbered but are listed as sections alphabetically by etiological agent.

** 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). Extra credit points are not in the Canvas gradebook. They will be added manually at the end of the course when grades are calculated.

Early turn in deadline for receiving extra credit: 11:59PM, Wednesday, July 29, 2020

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

Course Materials and Technology

Required Text: Handbook of Zoonoses: Identification and Prevention by J. L. Colville and D. L. Berryhill. 2007 ISBN: 978-0-323-04478-3. Currently text is only available in ebook format. See Canvas course site for more information.

Additional Readings

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
- Level 4 Virus Hunters of the CDC: Tracking Ebola and the World’s Deadliest Viruses by Joseph McCormick
- The Chimp and the River: How AIDS Emerged from the African Forest by David Quammen

Technical Support

For technical support for the materials posted in the course e-Learning site, activities, and assessments, please post in the appropriate discussion or contact:

Name: Truly Hardemon, MEd, Instructional Designer for Public Health Programs

Phone Number: 352-273-5822

Email Address: hardemont@ufl.edu

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

Phone Number: (352) 392-HELP (4357) Option 2

Email: helpdesk@ufl.edu

Webpage with Chat: [UF Computing Help Desk](#)

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

| Requirement | % of final grade | Points |
|-----------------------------------|---------------------------|-------------------------------|
| 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 (i.e., how do course points translate into letter grades).

| | | | | | | | | | | | | | |
|---------------|---|----|----|---|----|----|---|----|----|---|----|---|--|
| Points earned | | | | | | | | | | | | | |
| 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. 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. In addition, the Bachelor of Health Science Program does not use C- grades.

Letter grade to grade point conversions are fixed by UF and cannot be changed.

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|--------------|-----|------|------|-----|------|------|-----|------|------|-----|------|-----|-----|-----|-----|-----|
| 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 [Grading and Grade Policies](#) posted by the Registrar's Office.

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 Technical Issues

Any requests for make-ups due to technical issues **must** be accompanied by the ticket number received from the UF Computing Help Desk created 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 greater detail on excused absences, see the [Attendance Policies](#) posted by the Registrar's Office.

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 Codes](#) information at the Dean of Students Office website or the [Academic Expectations](#) information at the Graduate School website for additional details.

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 [Faculty Course Evaluations](#). 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.

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 Disability Resource Center](#) (DRC) within the first week of class. The DRC 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. Online and in person assistance is available.

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 [Student Health Care Center](#) website.

Crisis intervention is always available 24/7 from the [Alachua County Crisis Center](#) at (352) 264-6789.

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.

INCLUSIVE LEARNING ENVIRONMENT

Public health and health professions are based on belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace the University of Florida's Non-Discrimination Policy, which reads:

“The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans’ Readjustment Assistance Act.”

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the [Office of Multicultural & Diversity Affairs](#) website.