

UNIVERSITY OF FLORIDA
 Department of Geography
 GEOG 3454 People and Plagues
 SYLLABUS: 2024

INSTRUCTOR INFORMATION:

Instructor:	Dr. Sadie Ryan
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COURSE INFORMATION:

Time:	Tu/Th 7,8; 7 (Tu: 1.55-3.50pm; Thurs 1.55-2.45pm)
Location:	MAT 0002

COURSE DESCRIPTION: This course is an introduction to emerging infectious diseases (EIDs) in the context of previous outbreaks, focusing on geography, origin, and management response. We will explore basic models of infectious disease processes, transmission cycles and life-histories of host-vector systems, and the ecological and landscape conditions that favor emergence. We will also explore the social, demographic, economic, and environmental context of historical and modern epidemics. The course will comprise lecture style introductions to weekly themes, which will center around a disease, or group of diseases, as illustrations of the impact of outbreaks, responses, or environmental context. These lecture style sessions will be complemented with student-led discussions and/or group activities, based on the readings and exercises provided by the instructor. Readings and supporting materials are taken from a wide variety of sources such as academic journals, popular news sources and magazines, agency factsheets, documentaries, and popular literature and movies. Both assigned and optional readings will be made available to students to develop thoughts and discussions. Accordingly, students will be expected to have read the assigned reading and be prepared to comment and participate in discussion.

COURSE OBJECTIVES/STUDENT LEARNING OUTCOMES:

- Define and learn terminology used to discuss and describe emerging infectious diseases (EIDs): hosts, reservoirs, vectors, accidental hosts, dead-end hosts, viral chatter, micro- and macroparasites.
- Describe and discuss EID history and management: Case histories, previous management responses, successes and failures, public perceptions, social impacts and education, the role of veterinary, agricultural and public health players and agencies.
- Explore EIDs and Ecology: how emergence interacts with the landscape from ecological, demographic and climate perspectives, and what that will mean in the future.

After completing this course students should be able to:

1. Define what an emerging infectious disease (EID) is, and discuss how this differs from endemic and chronic diseases.
2. Describe and discuss past outbreaks of infectious diseases, particularly of zoonotic origin, their impact and management.
3. Describe the ecological conditions that favor disease emergence and how this fits into our current understanding of the domestic-agricultural-wildlife interfaces, and future global change predictions.
4. Define and learn fundamental EID terminology, such as: hosts, reservoirs, vectors, accidental hosts, dead-end hosts, viral chatter, micro- and macroparasites.

5. Explore *basic* quantitative models of infectious disease processes, understanding of R_0 and compartmental modeling.
6. Describe the direct and indirect transmission cycles for several EIDs of concern, and several aspects of their in-host immunological and cellular biology.
7. Discuss potential intervention and management strategies for different scenarios of EIDs, from veterinary cordons to economic strategies to public health plan implementation.

REQUIRED TEXTS: *None*. Students will be assigned a set of weekly readings, made available to them online, or in hard copy from the instructor.

GRADE DISTRIBUTION:

1. Class Participation (200 points - 20%)

Students are expected to participate in discussions and lead specific discussions in groups via a short presentation of the discussion topic, and introducing questions based on the readings, for the group to explore. Students will be assigned a date and specific discussion topic(s) to lead.

2. Reading comprehension homework (200 points – 20%)

Students are expected to complete reading comprehension homework questions prior to each class discussion. These assignments are to be completed and submitted via Canvas.

3. In-class Tests (300 points - 30%)

Three short (one-period) tests will be administered throughout the course, in class. These will comprise a mix of multiple choice, short answer, diagramming, and short essay responses. Each test is worth 10 points.

4. Review/Critique short paper (100 points - 10%)

Students will write a short essay (ca. 1,000 words, 3-5 pages), on a book, movie, documentary, or set of articles, related to the course themes. Topic approval by the instructor is required.
Topic – 5 points, Paper – 95 points

5. Final paper (200 points - 20%)

Students will take one of the diseases we discuss, or another EID of choice, and go into much greater depth. This paper will address multiple facets of the EID, such as economic and social impacts, biological detail beyond the scope of the course, management history or potential options, etc. Length is maximum 4,000 words and must have proper references. Students can work in groups, TBD. We will approach this in stages, with a final copy due the last week of the semester.

The stages of paper development will be graded and returned to the student, to ensure progress:
Topic – 5 points, Outline – 45 points, Draft – 50 points, final paper – 100 points.

CLASSROOM POLICIES:

- **Attendance & makeup policy:** Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.
- **Late Policy:** A class roll will be passed around at the beginning of class. If a student is late, they will have to sign the roll after class. Such lateness distracts other students and the instructor and will affect the student’s final participation grade. Students will lose 1% from their final grade each time they arrive late.
- **Cell phone and texting policy:** Students must turn cell phones to vibrate before coming to class. Each time a student’s cell phone rings or each time that a student texts during class, 1% will be deducted from that student’s final grade for each instance.
- **Grade Disputes:** Should a student wish to dispute any grade received in this class (other than simple

addition errors), the dispute must be in writing and be submitted to the instructor within a week of receiving the grade. The dispute should set out very clearly, the grade that the student believes the assignment should have received as well as why he or she believes that he or she should have received such a grade.

Grading Scale (& GPA equivalent):

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
100-93 (4.0)	92-90 (3.67)	89-87 (3.33)	86-83 (3.0)	82-80 (2.67)	79-77 (2.33)	76-73 (2.0)	72-70 (1.67)	69-67 (1.33)	63-66 (1.0)	62-60 (0.67)	59- (0)

Note: A grade of C- is not a qualifying grade for major, minor, Gen Ed, or College Basic distribution credit. For further information on UF's Grading Policy, see:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx#hgrades>

<http://www.isis.ufl.edu/minusgrades.html>

Academic Honesty: UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Accommodations for Students with Disabilities: Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. Contact the Disability Resources Center (<http://www.dso.ufl.edu/drc/>) for information about available resources for students with disabilities.

Counseling and Mental Health Resources: Students facing difficulties completing the course or who are in need of counseling or urgent help should call the on-campus Counseling and Wellness Center (352-392-1575; <http://www.counseling.ufl.edu/cwc/>).

Online Course Evaluation Process: Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online 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>.

Use of ChatGPT/AI writing help: Students are expected to write their own original words, and not simply use ChatGPT/AI tools to generate assignment responses. Writing assignments will be turned in through plagiarism checking software, which can detect some AI facilitated text generation. In certain situations, using AI tools to rework sentences can be helpful, and useful for communication of ideas. Further, AI writing tools can level the playing field for those facing language barriers. Students are cautioned that GPT tools have been found to fabricate scientific evidence and references in very convincing ways, but some AI tools are useful to find scientific literature to reference (for this course). Thus, students are expected to describe the use of any AI tools in course assignments, and to credit all tools and resources appropriately, and to be very aware of the shortcomings. As this is an evolving tech, so too will the best practices evolve. In this course, AI is unlikely to be a useful shortcut to completing assignments successfully, but certain uses may be helpful, and can be credited appropriately.

COURSE SCHEDULE

Students should note that the syllabus is a guideline and that there may be changes to the class schedule.

WK	Tues	Tuesday Topic (1.55-3.50pm)	Thurs	Thursday Topic (1.55-2.45pm)	Landmarks/ Discussion #
1	1/9/2024	Course overview and Intro to EIDs	01/11/24	Course overview	
2	01/16/24	Basic Epi and Disease Models	01/18/24	EIDs Discussion	D1
3	01/23/24	Plague	01/25/24	Plague Discussion	D2
4	01/30/24	TB	02/01/24	TB Discussion	D3
5	02/06/24	Test 1	02/08/24	Paper writing Discussion	Test 1, Choose Critique Topic
6	02/13/24	Pox - smallpox etiology, history, vaccinia vaccination, people, pets, and pox	02/15/24	Pox Discussion	D4
7	02/20/24	Measles, vaccinations, scandals, herd immunity	02/22/24	Vaccinations Discussion	D5, Choose Paper Topic
8	02/27/24	Flu	02/29/24	Flu Discussion	D6, Critique due
9	03/05/24	Wildlife EIDs	03/07/24	Test 2	Test 2
SB	03/12/24	SPRING BREAK	03/14/24	SPRING BREAK	SPRING BREAK
10	03/19/24	Malaria	03/21/24	Malaria Discussion	D7, Outline due
11	03/26/24	(Ortho)Flaviviruses	03/28/24	(Ortho)Flaviviruses Discussion	D8
12	04/02/24	Trypanosomiasis	04/04/24	Tryps Discussion	D9, Paper Draft Due
13	04/09/24	Tickborne Diseases and VHF	04/11/24	TBDs and VHF Discussion	D10
14	04/16/24	WATCH CONTAGION	04/18/24	Work on Papers	
15	04/23/24	Test 3			Test 3, Paper Due