

# IDS2935: The Next Pandemic

Quest 2 | section 2BH1

## I. General Information

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### Class Meetings

Spring 2023

<b>Time:</b>	Asynchronous Online Instruction
<b>Location:</b>	All course materials are provided via Canvas

### Instructor

<b>Instructor:</b>	Dr. Gabriela Hamerlinck Turlington 3122   352.294.9051
<b>Office Hours:</b> Office hours will be held both in Dr. Hamerlinck's office and via Zoom. The Zoom link will be provided on the front page of our Canvas course.	TBD (or by appointment)
<b>E-Mail:</b>	<a href="mailto:ghamerlinck@ufl.edu">ghamerlinck@ufl.edu</a>

### Teaching Assistants

- Gavriella Hecht | Office: Turlington 1216 | Office hours: TBA | [ghecht@ufl.edu](mailto:ghecht@ufl.edu)
- Michelle Ruiz | Office: Turlington 1216 | Office hours: TBA | [michi28@ufl.edu](mailto:michi28@ufl.edu)

### Course Description

This course is an introduction to human diseases that have shaped our civilization. Students will learn about significant historic outbreaks, modern diseases that plague our society, and hypothesize what the next pandemic will be. Disease outbreaks today are growing increasingly complex with the many emerging social, political and demographic changes in our population, as well as dynamic changes in animal and vector populations and the environment. As a result, we need new and creative mechanisms of disease prevention and control. Diseases with a pandemic potential could greatly influence the social, political and economic stability of a country, region or even the world.

There will be a considerable focus on disease burden held by resource poor areas, as well as the underlying risk factors that lead to their emergence and geographic spread. We will review a variety of diseases that have a global health significance, and explore different

interventions (prevention and control strategies) used to reduce disease burden and stop disease outbreaks.

This Quest 2 course also leverages the geographical spread of historic pandemics to guide students through predicting where the next pandemic will strike – asking students to consider the following pressing questions: What social, political, biological, and environmental factors led to historic disease outbreaks? What would happen if our planet experienced a pandemic today? How can we prepare for the next disease pandemic?

## Quest and General Education Credit

- Quest 2
- Biological Sciences
- International (N)

*This course accomplishes the [Quest](#) and [General Education](#) objectives of the subject areas listed above. A minimum grade of C is required for Quest and General Education credit. Courses intended to satisfy Quest and General Education requirements cannot be taken S-U.*

Required & Recommended Course Materials: *None*. Students will be assigned a set of weekly readings and videos to watch before class. All readings and links to all videos will be made available through Canvas or in hard copy from the instructor.

Materials and Supplies Fees: *None*

## II. Graded Work

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### 1. Description of Graded Work

Assignment	Description	Percent of Grade
Module Quizzes	Students will complete a weekly 5-question multiple-choice quiz on Canvas that will test their understanding of the assigned video.	20%
Reading homework	Students will complete a series of reading comprehension homework assignments wherein they briefly summarize one of the required readings in a module.	10%
Exams (x2)	Two short (one-hour) tests will be administered at the end of the first and second units. Each of the exams will comprise a mix of multiple choice, short answer, diagramming, and short essay responses.	20%
Discussions	Most modules have a graded discussion board assigned. Each discussion will provide a prompt for students to respond to related to the module's content. A response to a classmate is a necessary part of each discussion.	20%

Final Project	<p>Each student will complete a final project that designs the next pandemic and the global response plan. The final project is composed of three parts and is introduced during week 13:</p> <ul style="list-style-type: none"> <li>Recorded presentation introducing The New Disease, a proposed management and surveillance plan, and summarizes both socioeconomic and cultural risk factors.</li> <li>Peer reviews. Each student is assigned two peer presentations to review according to the rubric. Each review also has students propose a new management strategy for their peer's New Disease. Each review is graded out of 25 points, for a total of 50 possible points.</li> <li>Term paper briefly summarizing The New Disease in written format. Students will also respond to prompts regarding the implementation of control, prevention and/or treatment strategies, a communication and cooperation plan, and how they intend to disseminate information between geographic locations and to the general public from scientists or public health officials.</li> </ul>	25%
Reflection	Students will periodically reflect on course themes and their personal beliefs and biases by composing a short reflection. There is one reflection per unit.	5%

*Unless otherwise noted, all assignments are scored out of 100 points.*

## Grading Scale

For information on how UF assigns grade points, visit:

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

A	94 – 100%		C	74 – 76%
A-	90 – 93%		C-	70 – 73%
B+	87 – 89%		D+	67 – 69%
B	84 – 86%		D	64 – 66%
B-	80 – 83%		D-	60 – 63%
C+	77 – 79%		E	<60

## Grading Rubric(s)

Guided Reflection Rubric				
	Excellent Work	Standard Work	Needs Improvement	Points
Response to Prompt (Content)	75 to >50.0 pts The student provides a thoughtful reflection (personal feelings and application of the topic related to their career)	50 to >0.0 pts The student provides either a thoughtful reflection or analysis of the prompt's topic but not both.	0 pts The student does not include a personal reflection, nor do they focus their analysis on the main topic of the prompt.	75 pts

	and critical analysis of the topic.			
Response to Prompt (Communication of Ideas/ Grammar)	25 to >20.0 pts The student clearly communicates their ideas and uses proper grammar and spelling.	20 to >0.0 pts The student's message is mostly clear, but multiple grammar or spelling errors make understanding difficult.	0 pts Multiple grammar or spelling errors lead to poor communication of ideas.	25 pts

<b>Reading Homework Rubric</b>				
	Excellent Work	Standard Work	Needs Improvement	Points
Response to Prompt (Content)	75 to >50.0 pts The summary succinctly captures the reading's main idea, point, or question.	50 to >25.0 pts The summary mostly captures the reading's main idea, point, or question.	25 to >0 pts The summary does not capture the reading's main idea, point, or question.	75 pts
Response to Prompt (Communication of Ideas/ Grammar)	25 to >20.0 pts The student communicates their ideas and uses proper grammar and spelling.	20 to >10.0 pts The student's message is primarily clear, but multiple grammar or spelling errors make understanding difficult.	10 to >0 pts Needs Improvement Multiple grammar or spelling errors lead to poor communication of ideas.	25 pts

<b>Discussion Board Rubric</b>				
	Excellent Work	Standard Work	Needs Improvement	Points
Response to Prompt (Content)	50 to > 40.0 pts The student provides a thoughtful reflection (personal feelings and application of the topic related to their career) and critical analysis of the topic.	40 to > 20.0 pts The student provides either a thoughtful reflection or analysis of the prompt's topic but not both.	20 to > 0 pts The student does not include a personal reflection, nor do they focus their analysis on the main topic of the prompt.	50 pts
Response to Prompt (Communication of Ideas/ Grammar)	25 to >20.0 pts The student clearly communicates their ideas and uses proper grammar and spelling.	20 to > 10.0 pts The student's message is mostly clear, but multiple grammar or spelling errors make understanding difficult.	10 to > 0 pts Multiple grammar or spelling errors lead to poor communication of ideas.	25 pts

Response to One Classmate	25 to >20.0 pts The student provides a clear, respectful reply and critique using proper grammar and spelling. The student adds to the comments of the classmate by explaining how the classmate's post impacted them or offering an alternative viewpoint to the classmate	20 to >10.0 pts The student provides a respectful reply but an element of their reply is unclear/poorly communicated and/or the student does not build upon the classmate's post.	10 to >0 pts The student does not reply, offers a very short reply that does not add anything new to the discussion, has a disjointed reply, or provides a disrespectful reply that is more attacking than critiquing the classmate's ideas	25 pts
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<b>Final Project (Presentation) Rubric</b>				
	Excellent Work	Standard Work	Needs Improvement	Points
Basic introduction to the proposed New Disease	26 to >16.0 pts Student provides a clear and detailed description	16 to >6.0 pts Students provides a description where some elements are missing	6 to >0 pts Students' description lacks multiple major elements	26 pts
The proposed disease management	18 to >11.0 pts Student provides a clear and detailed description	11 to >5.0 pts Students provides a description where some elements are missing	5 to >0 pts Students' description lacks multiple major elements	18 pts
The proposed disease surveillance	12 to >8.0 pts Student provides a clear and detailed description	8 to >4.0 pts Students provides a description where some elements are missing	4 to >0 pts Students' description lacks multiple major elements	12 pts
Social-economic risk assessment	12 to >8.0 pts Student provides a clear and detailed description	8 to >4.0 pts Students provides a description where some elements are missing	4 to >0 pts Students' description lacks multiple major elements	12 pts
Cultural risk assessment	12 to >8.0 pts Student provides a clear and detailed description	8 to >4.0 pts Students provides a description where some elements are missing	4 to >0 pts Students' description lacks multiple major elements	12 pts
Concluding remarks	10 to >6.0 pts Student provides a clear and detailed description	6 to >3.0 pts Students provides a description where	3 to >0 pts Students' description lacks multiple major elements	10 pts

		some elements are missing		
Oral presentation quality	10 to >6.0 pts Presentation is free of space fillers (ah, um, well, like, etc.). Shows strong vocal variety, enthusiasm, enunciates clearly. Follows formatting guidelines.	6 to >3.0 pts Rarely uses space fillers (ah, um, well, like, etc.). Shows some vocal variety, enthusiasm. A few words not enunciated clearly. Mostly follows formatting guidelines.	3 to >0 pts Show minimal vocal variety, enthusiasm. Some words not enunciated clearly. Does not follow formatting guidelines.	10 pts

<b>Final Project (Term Paper) Rubric</b>				
	Excellent Work	Standard Work	Needs Improvement	Points
Basic introduction to the proposed New Disease	15 to >10.0 pts Student provides a clear and detailed description	10 to >5.0 pts Students provides a description where some elements are missing	5 to >0 pts Students' description lacks multiple major elements	15 pts
Implementation of management strategies	40 to >20.0 pts Student provides a clear and detailed description	20 to >10.0 pts Students provides a description where some elements are missing	10 to >0 pts Students' description lacks multiple major elements	40 pts
Communication and cooperation plan	20 to >10.0 pts Student provides a clear and detailed description	10 to >5.0 pts Students provides a description where some elements are missing	5 to >0 pts Students' description lacks multiple major elements	20 pts
Dissemination plan	15 to >10.0 pts Student provides a clear and detailed description	10 to >5.0 pts Students provides a description where some elements are missing	5 to >0 pts Students' description lacks multiple major elements	15 pts
Report quality	10 to >6.0 pts Writing is clear and concise, using references when appropriate. Follows all formatting requirements.	6 to >3.0 pts Writing is mostly clear and concise, generally uses references when appropriate. Follows some formatting requirements.	3 to >0 pts Writing is not clear or concise, appropriate references not used. Many formatting requirements not met.	10 pts

### III. Annotated Weekly Schedule

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

Module and Topic	Required Learning Content and Assignments
<b>Unit 1: Historic Pandemics</b>	
Week 1: Introduction to Pandemics	<p>At the end of this module, students will be able to 1) define infectious and noninfectious diseases, 2) explain what is meant when an organism is termed an "infectious agent," and 3) compare and analyze different types of infectious agents.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture defining what a disease is, how it becomes an epidemic or a pandemic, and a summary of agents of disease</li> <li>• Senthilingam, M. (2017, April 10). <i>Seven reasons we're at more risk than ever of a global pandemic</i>. CNN.</li> <li>• <i>Agents of Disease</i> (14 pages; adapted from <a href="#">EDC's Exploring Infectious Disease</a>)</li> <li>• Hillman, D. &amp; Baron, A. (producers). (2013). Don't Panic – The Facts About Population. Wingspan Productions for BBC. (59 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Reading homework – Agents of Disease</li> </ul>
Week 2: Plague	<p>At the end of this module, students will be able to 1) identify different types of plague, 2) identify the transmission pathways of plague, 3) explain how plague relates to quarantine, and 4) reflect on your beliefs, biases, and experiences with respect to historical plague outbreaks.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture introducing how the plague has shaped human society, including basic plague biology and a summary of the three historic plague pandemics.</li> <li>• Barbieri, R., Signoli, M., Chev�, D., Costedoat, C., Tzortzis, S., Aboudharam, G., Raoult, D., &amp; Drancourt, M. (2020). <i>Yersinia pestis: The natural history of plague</i>. <i>Clinical Microbiology Reviews</i>, 34(1). <a href="https://doi.org/10.1128/cmr.00044-19">https://doi.org/10.1128/cmr.00044-19</a>.</li> <li>• Wright, C. &amp; Scott, K. (producers). (2014). Return Of The Black Death. British Broadcasting Corporation. (47 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Reading Homework – Plague</li> <li>• Module quiz - Plague</li> <li>• Guided Reflection</li> </ul>

<p>Week 3: Influenza</p>	<p>At the end of this module, students will be able to 1) discuss the 1918 Spanish Flu pandemic from Biological and Geopolitical-Socioeconomic viewpoints, 2) summarize the major perspectives about the risk of historic and future influenza pandemics, and 3) identify common characteristics of historic influenza pandemics.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture about the influenza pathogen, and the annual flu shot. A brief introduction to the 20<sup>th</sup> century influenza pandemics and some future flu threats to think about global preparedness planning.</li> <li>• Taubenberger, J. K., &amp; Morens, D. M. (2006). 1918 Influenza: the mother of all pandemics. <i>Emerging infectious diseases</i>, 12(1), 15–22. <a href="https://doi.org/10.3201/eid1201.050979">https://doi.org/10.3201/eid1201.050979</a>.</li> <li>• Webster, R. G., &amp; Walker, E. J. (2003). Influenza: The world is teetering on the edge of a pandemic that could kill a large fraction of the human population. <i>American Scientist</i>, 91(2), 122–129. <a href="http://www.jstor.org/stable/27858180">http://www.jstor.org/stable/27858180</a>.</li> <li>• Thompson, A. (producer). (2018). The Flu That Killed 50 Million. [Video/DVD] BBC Worldwide. (57 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Reading Homework – Influenza</li> <li>• Module quiz - Influenza</li> <li>• Discussion – Influenza</li> </ul>
<p>Week 4: Smallpox</p>	<p>At the end of this module, students will be able to 1) identify characteristics of smallpox, 2) reflect on your beliefs, biases, and experiences with respect to historic smallpox outbreaks, 3) summarize the major perspectives about the relationship between smallpox and pandemics, and 4) develop a course of action to stop the spread of disease based on the given scenario.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture that includes a basic introduction to the smallpox pathogen and the clinical manifestations of disease; a timeline of historic smallpox outbreaks; a brief account of the smallpox vaccine and global eradication; and some thoughts on the potential threat of smallpox being used as a bioterror agent.</li> <li>• Henderson D. A. (2011). The eradication of smallpox--an overview of the past, present, and future. <i>Vaccine</i>, 29 Suppl 4, D7–D9. <a href="https://doi.org/10.1016/j.vaccine.2011.06.080">https://doi.org/10.1016/j.vaccine.2011.06.080</a>.</li> <li>• Tognotti E. (2010). The eradication of smallpox, a success story for modern medicine and public health: what lessons for the future?. <i>Journal of infection in developing countries</i>, 4(5), 264–266. <a href="https://doi.org/10.3855/jidc.1204">https://doi.org/10.3855/jidc.1204</a>.</li> <li>• Brilliant, L. (2006). My Wish: Help me stop pandemics. TED Conferences. <a href="https://youtu.be/MNhiHf84P9c">https://youtu.be/MNhiHf84P9c</a>. (27 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Reading Homework – Smallpox</li> <li>• Module quiz - Smallpox</li> <li>• Discussion – Smallpox and Research Ethics</li> </ul>



<p>Week 5: Exam</p>	<p>At the end of this module, students will be able to 1) review concepts and material from Week 1 to Week 4, and 2) identify key concepts and major knowledge covered from Week 1 to Week 4.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Unit summary video to help you start to organize your thoughts in preparation for the first exam.</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Discussion – Exam 1 Review</li> <li>• Exam 1 **this exam will occur in-person on campus. It is scheduled for 8-10pm on Friday, February 10<sup>th</sup>, 2023**</li> </ul>
<p><b>Unit 2: Current Pandemics</b></p>	
<p>Week 6: Vaccines</p>	<p>At the end of this module, students will be able to 1) identify the common types of vaccines in use today, 2) identify strengths and weaknesses of ongoing vaccination campaigns, 3) summarize the major arguments about the vaccine use given competing evidence and viewpoints, and 4) create an infographic to present a piece of vaccine history.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture summarizing how vaccines are made and the different types of vaccinations. The lecture also includes two case studies: measles (MMR) as a vaccine success story, and Dengvaxia as a vaccination failure story.</li> <li>• Fatima, K., &amp; Syed, N. I. (2018). Dengvaxia controversy: impact on vaccine hesitancy. <i>Journal of global health, 8</i>(2), 010312. <a href="https://doi.org/10.7189/jogh.08-020312">https://doi.org/10.7189/jogh.08-020312</a>.</li> <li>• Gubler, D. J., &amp; Halstead, S. B. (2019). Is Dengvaxia a useful vaccine for dengue endemic areas?. <i>BMJ (Clinical research ed.)</i>, 367, I5710. <a href="https://doi.org/10.1136/bmj.I5710">https://doi.org/10.1136/bmj.I5710</a>.</li> <li>• Summers, B. (producer). (2016). Dengue: The hunt for a vaccine. [Documentary] Rockhopper Productions, Ltd. (45 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Reading Homework – Vaccines</li> <li>• Module quiz - Vaccines</li> <li>• Discussion – Vaccines</li> </ul>
<p>Week 7: Coronaviruses</p>	<p>At the end of this module, students will be able to 1) identify what COVID-19 stands for, 2) differentiate the relationship between COVID-19 and coronaviruses, 3) identify what impact COVID-19 had on public health and human history, 4) explain the advantages of using mathematical disease modeling to understand a pandemic, and 5) create an infographic to present how a certain country responded to the COVID-19 pandemic.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture summarizing the coronaviruses that have caused recent epidemics and pandemics, and how diseases get their names. The lecture also helps us understand how we can quantify how impactful a disease is in a population.</li> </ul>

	<ul style="list-style-type: none"> <li>Recorded seminar by Dr. Nina Fefferman (UT-Knoxville) titled “The role of applied math in real-time pandemic response: How basic disease models work.” (83 mins).</li> <li>Interactive NY Times article “How the virus won.” (<a href="https://www.nytimes.com/interactive/2020/us/coronavirus-spread.html">https://www.nytimes.com/interactive/2020/us/coronavirus-spread.html</a>)</li> <li>One of: <ul style="list-style-type: none"> <li>van der Graaf, R., Browne, J. L., &amp; Baidjoe, A. Y. (2022). Vaccine equity: Past, present, and future. <i>Cell Reports Medicine</i>, 3(3), 100551. <a href="https://doi.org/10.1016/j.xcrm.2022.100551">https://doi.org/10.1016/j.xcrm.2022.100551</a>.</li> <li>Harman, S., Erfani, P., Goronga, T., Hickel, J., Morse, M., &amp; Richardson, E. T. (2021). Global vaccine equity demands reparative justice — not charity. <i>BMJ Global Health</i>, 6(6). <a href="https://doi.org/10.1136/bmjgh-2021-006504">https://doi.org/10.1136/bmjgh-2021-006504</a>.</li> <li>Nkengasong, J. N., Ndembi, N., Tshangela, A., &amp; Raji, T. (2020). Covid-19 vaccines: How to ensure Africa has access. <i>Nature</i>, 586(7828), 197–199. <a href="https://doi.org/10.1038/d41586-020-02774-8">https://doi.org/10.1038/d41586-020-02774-8</a>.</li> </ul> </li> <li>Two of a series of mainstream media pieces summarizing current events. The list of available articles will be updated to reflect the most recent publications and available via Canvas. Examples include: <ul style="list-style-type: none"> <li>Brossard, D., &amp; Scheufele, D. A. (2022). The chronic growing pains of communicating science online. <i>Science</i>, 375(6581), 613–614. <a href="https://doi.org/10.1126/science.abo0668">https://doi.org/10.1126/science.abo0668</a></li> <li>Klein, E. (2022). The COVID policy that really mattered wasn’t a policy. NY Times.</li> </ul> </li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>Reading Homework – Coronaviruses</li> <li>Module quiz - Coronaviruses</li> <li>Discussion – Coronaviruses</li> </ul>
Week 8: Cholera	<p>At the end of this module, students will be able to 1) analyze the global efforts in controlling cholera, 2) identify the history of cholera and how it relates to the field of medical geography, 3) identify what impact historic cholera outbreaks have on public health, and 4) summarize the key points of the assigned reading.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>Lecture introduces the pathogen and disease, outlines the historic cholera pandemics and the current pandemic, as well as describes the WHO roadmap to addressing the cholera threat by 2030.</li> <li>Acevedo, C. G. F. (2020). From Cholera to COVID-19: A Historical Review of Misinformation during Pandemics. <i>Progressio Journal on Human Development</i>, 14(1).</li> <li>Harman, S., Erfani, P., Goronga, T., Hickel, J., Morse, M., &amp; Richardson, E. T. (2021). Global vaccine equity demands reparative justice — not charity. <i>BMJ Global Health</i>, 6(6). <a href="https://doi.org/10.1136/bmjgh-2021-006504">https://doi.org/10.1136/bmjgh-2021-006504</a>.</li> <li>George, R. (2013). <i>Let’s talk crap. Seriously</i>. TED Conferences. (14 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>Reading Homework – Cholera</li> </ul>

	<ul style="list-style-type: none"> <li>• Module quiz - Cholera</li> <li>• Discussion – Cholera</li> </ul>
Week 9: Obesity	<p>At the end of this module, students will be able to 1) explain the strengths and weaknesses of public health strategies to control the ongoing obesity pandemic, 2) utilize different tools to analyze and distinguish obesity, 3) identify different influences of factors on obesity, and 4) explain the concept of the double burden of obesity and malnutrition and how it relates to poverty.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture introducing obesity as a pandemic, the global burden of the chronic condition, and who and/or what is to blame for the obesity pandemic, and what we can do to stop it.</li> <li>• Ford, N. D., Patel, S. A., &amp; Narayan, K. V. (2017). Obesity in low-and middle-income countries: burden, drivers, and emerging challenges. <i>Annual review of public health</i>, 38, 145-164.</li> <li>• Caballero, B. (2007). The global epidemic of obesity: an overview. <i>Epidemiologic reviews</i>, 29(1), 1-5.</li> <li>• Hoffman, J. (producer). (2012). <i>Weight of the Nation: Poverty and Obesity</i>. [Documentary] HBO. (24 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Reading Homework – Obesity</li> <li>• Module quiz - Obesity</li> <li>• Discussion – Hungry Planet: Global Diets</li> </ul>
Week 10: Exam	<p>At the end of this module, students will be able to 1) review concepts and material from Week 6 to Week 9, and 2) identify key concepts and major knowledge covered from Week 6 to Week 9.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Unit summary video to help you start to organize your thoughts in preparation for the second exam.</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Discussion – Exam 2 Review</li> <li>• Exam 2 **this exam will occur in-person on campus. It is scheduled for 8-10pm on Friday, March 24<sup>th</sup>, 2023**</li> </ul>
<b>Unit 3: Future Pandemics</b>	
Week 11: Climate and Health	<p>At the end of this module, students will be able to 1) compare and contrast the national and global effects of climate on human health, 2) summarize the key points of the assigned reading, and 3) propose a solution to combat a specific climate-sensitive health issue.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture focuses on a variety of health-related impacts of climate change and global warming.</li> <li>• McMichael, A. J., Woodruff, R. E., &amp; Hales, S. (2006). Climate change and human health: present and future risks. <i>Lancet (London, England)</i>, 367(9513), 859–869. <a href="https://doi.org/10.1016/S0140-6736(06)68079-3">https://doi.org/10.1016/S0140-6736(06)68079-3</a>.</li> </ul>

	<ul style="list-style-type: none"> <li>• Lustgarten, A. (2020, May 7). <i>How climate change is contributing to skyrocketing rates of infectious disease</i>. ProPublica.</li> <li>• Interview with Dr. Renee Salas on the effects of climate change on human health and health systems. Produced by the New England Journal of Medicine. (13 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Reading Homework – Climate and Health</li> <li>• Discussion – Mitigating the effects of climate change on human health</li> </ul>
Week 12: Ebola	<p>At the end of this module, students will be able to 1) identify the history and characteristics of Ebolavirus Disease, 2) identify the impact of Ebola on global public health, 3) propose and evaluate the pandemic potential of a hypothetical Ebola mutation, and 4) summarize the key points of the assigned reading.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture introduces the history, transmission, and clinical manifestation of Ebola using the 2014-2016 Western Africa epidemic as a case study.</li> <li>• Zimmer, C. (2014, October 24). <i>As ebola spreads, so have several fallacies</i>. The New York Times.</li> <li>• Kilgo, D. K., Yoo, J., &amp; Johnson, T. J. (2019). Spreading Ebola Panic: Newspaper and Social Media Coverage of the 2014 Ebola Health Crisis. <i>Health communication</i>, 34(8), 811–817. <a href="https://doi.org/10.1080/10410236.2018.1437524">https://doi.org/10.1080/10410236.2018.1437524</a>.</li> <li>• Elisco, D. &amp; Barrat, J. (producers). (2016). <i>Spillover – Zika, Ebola &amp; Beyond</i>. [Documentary] Public Broadcasting Service. (56 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Reading Homework – Ebola</li> <li>• Module quiz - Ebola</li> <li>• Discussion – Ebola as the Next Pandemic</li> </ul>
Week 13: Final Project	<p>At the end of this module, students will be able to 1) propose a new disease, disease management, disease surveillance, social-economic risk assessment, and cultural risk assessment in the final presentation, 2) communicate effectively in the final presentation, 3) evaluate peers' presentations by using learned tools and knowledge, and 4) develop a disease management plan for a given pandemic threat.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Recorded introduction to the three final project assignments: the presentation, peer reviews, and term paper. The goal of the final project is to develop a New Disease that you believe will cause the next pandemic. You will also be producing a pandemic preparedness plan to combat or prevent the New Disease from spreading.</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Final Presentation</li> <li>• Peer Reviews</li> </ul>

	<ul style="list-style-type: none"> <li>• Term Paper</li> </ul>
Week 14: Zombies	<p>At the end of this module, students will be able to 1) explain syndromic surveillance, and 2) discuss the differences between management of real-life diseases and fictitious zombie cases.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture compares zombieism to rabies, considers the pandemic potential of zombies, and poses some hypothetical questions about disease control and ethics.</li> <li>• Centers for Disease Control and Prevention (U.S.), Office of Public Health Preparedness and Response. (n.d.). <i>Preparedness 101; Zombie pandemic</i>. Centers for Disease Control and Prevention.</li> <li>• Yong, E. (2014). <i>Zombie roaches and other parasite tales</i>. TED Conferences. (13 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Discussion – Stopping the Zombie Pandemic</li> </ul>
Week 15: Wrap Up	<p>At the end of this module, students will be able to 1) reflect on the new knowledge and skills gained from this course, 2) summarize the core value and key terms of this course, and 3) develop a disease management plan for a given pandemic threat.</p> <p><b>Required Learning Content:</b></p> <ul style="list-style-type: none"> <li>• Lecture with a brief summary of pandemic fatigue and how pandemics end.</li> <li>• Farewell recording to summarize the semester.</li> <li>• PBS interview with David Quammen called “Why deadly viral pandemics are becoming more common?” (14 mins).</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Guided Reflection – Future Pandemics</li> </ul>

## IV. Student Learning Outcomes (SLOs)

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At the end of this course, students will be expected to have achieved the [Quest](#) and [General Education](#) learning outcomes as follows:

**Content:** *Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline(s).*

- Discuss and describe fundamental concepts relating to disease outbreaks through human history (**B**). **Assessments:** module quizzes, exams, graded discussion boards, reading homework.
- Explain how diseases can become pandemics by exploring how emergence interacts with the landscape from ecological, demographic and climate perspectives (**Quest 2, B, N**). **Assessments:** module quizzes, exams, graded discussion boards, reading homework, final project (presentation & term paper).

**Critical Thinking:** *Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the discipline(s).*

- Analyze and interpret the impact of socioeconomic, environmental, political, and demographic factors on the risk and spread of a disease through a global population (**Quest 2, B, N**). **Assessments:** module quizzes, exams, graded discussion boards, reading homework.
- Synthesize required course content (lectures, readings, documentaries, etc.) to develop a global response plan for a pandemic (**Quest 2, B, N**). **Assessments:** final project (presentation, peer reviews, term paper).
- Reflect on current challenges of preventing the global spread of disease, and how disease risk differs across international communities (**N**). **Assessments:** student-led discussions, and guided reflections.

**Communication:** *Students communicate knowledge, ideas and reasoning clearly and effectively in written and oral forms appropriate to the discipline(s).*

- Develop and present novel solutions for real-world problems regarding future pandemic threats (**Quest 2, B**). **Assessments:** graded discussion boards, final project (presentation, peer reviews, term paper).
- Explain key scientific findings in written, oral, and visual formats (**Quest 2, B**). **Assessments:** graded discussion boards and final project (presentation & term paper).

**Connection:** *Students connect course content with meaningful critical reflection on their intellectual, personal, and professional development at UF and beyond.*

- Articulate and critique personal beliefs, experiences, and behaviors related to course content regarding the spread of disease and potential future pandemics (**Quest 2**). **Assessments:** guided reflections.

## V. Quest Learning Experiences

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### 1. Details of Experiential Learning Component

During the semester, students read scientific articles, newspaper reports, and popular science pieces that are complementary to weekly course material. Additionally, they watch a supplemental video resource that delves more deeply into a specific pandemic or epidemic. For example, during week 3, students watch a documentary on the 1918 influenza pandemic that supplements the lecture which covers all the 20<sup>th</sup> and 21<sup>st</sup> century flu pandemics. These required readings and video resources provide a continuum of narratives from current research, historical documents, and future directions. In class, students also interact with a variety of data sets for analysis of medical geography patterns and consider global pandemic response plans.

### 2. Details of Self-Reflection Component

Students periodically reflect on course themes and their personal beliefs and biases by composing a short reflection. There is one reflection per unit. These assignments ask students to compose brief critical reflections of their beliefs, biases, and experiences with disease outbreaks and how they have been challenged, changed, or strengthened by the material we learn about and discuss in class.

#### Guided reflection prompts

*(Unit 1: Historic pandemics)* Reflecting on the plague documentary you watched this week, compose a thoughtful, 400-500 word response to the following questions: What similarities can you draw between the plague story that was told and what we are experiencing as a society today with COVID-19? What lessons do you think could be learned from how plague pandemics were handled previously to be applied in modern times?

*(Unit 2: Current pandemics)* Compose a thoughtful, 400-500 word response to the following: Pandemics have shaped human society, and have been plaguing us since the beginning of civilization, though it seems that we are constantly underprepared to face a new pandemic when one appears. As the world recovers from a disease outbreak, people begin to rationalize and contextualize their experiences. How deeply do you believe behaviors will change as a result of the COVID-19 pandemic? Please respond to this for 1) your own personal behaviors, 2) behaviors of Americans, and 3) behaviors of a global population.

*(Unit 3: Future pandemics)* Compose a thoughtful, 400-500 word response to the following: Throughout this semester you have learned about a wide variety of diseases that have caused pandemics in the past and future pandemic threats. Knowing that pathogens will continue to spill over into the human population, but also being familiar with scientific and

medical advances, do you feel hopeful or helpless at the end of this course? Hopeful about our ability to cope with future disease threats based on what lessons we have learned, or helpless in the face of a future pandemic.

## VI. Required Policies

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### **Attendance 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 at:

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

### **Students Requiring Accommodation**

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### **UF Evaluations Process**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

### **University Honesty Policy**

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 (<https://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.



## **Counseling and Wellness Center**

Contact information for the Counseling and Wellness Center:

<http://www.counseling.ufl.edu/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

## **The Writing Studio**

The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at <http://writing.ufl.edu/writing-studio/> or in 2215 Turlington Hall for one-on-one consultations and workshops.

## **In-Class Recordings**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

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If students have concerns about classroom issues, disagreements or grades, their first point of contact is the classroom instructor whose contact information appears on the syllabus. If the problem cannot be resolved, the student should email the next departmental contact: in

classes with TAs, this is the instructor of record, in classes without TAs, this may be the department chair. Their contact information can be found on the program's website at <https://geog.ufl.edu/>. That email should include a clear description of the student's concern, and any supporting documents. Most concerns are resolved at this level. If a resolution cannot be reached at the departmental level, the student will be referred to the Office of the UF Ombuds <https://www.ombuds.ufl.edu>.