

# IDS 2935 The Next Pandemic

## Quest 2

### I. Course Information

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Spring 2021

<b>Time:</b>	M/W/F Period 7 (1:55pm-2:45pm)
<b>Location:</b>	<b>Live section:</b> Class will meet in Leigh Hall 0104
	<b>Online section:</b> All class sessions will be held via Zoom. The Zoom link will be provided on the front page of our Canvas course

Primary General Education Designation: Biological Sciences

Secondary General Education Designation: International (N)

\*A minimum grade of C is required for general education

#### Instructor

<b>Instructor:</b>	Dr. Gabriela Hamerlinck Turlington 3122   352.294.7513
<b>Office Hours:</b> All office hours will be held via Zoom. The Zoom link will be provided on the front page of our Canvas course.	Monday 3:00 pm – 4:30 pm Wednesday 10:00 am – 1:00 pm Thursday 10:00 am – 11:30 am (or by appointment)
<b>E-Mail:</b>	<a href="mailto:ghamerlinck@ufl.edu">ghamerlinck@ufl.edu</a>

#### 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?

## Student Learning Objectives

In this class, students will...

1. **Discuss and describe** fundamental concepts relating to global disease outbreaks through human history
2. **Explain** how diseases can become pandemics by exploring how emergence interacts with the landscape from ecological, demographic and climate perspectives
3. **Analyze and interpret** the impact of socioeconomic, environmental, political, and demographic factors on the risk and spread of a disease through a global population
4. **Synthesize** course lectures, class discussions and activities to develop a global response plan for a pandemic
5. **Develop and present** novel solutions for real-world problems
6. **Explain** key scientific findings in written, oral, and visual formats
7. **Articulate and critique** their own personal beliefs and behaviors related to the spread of disease and potential future pandemics

## Course Objectives

This course will...

1. **Explore** the interrelatedness of globalization and socioeconomic risk factors on disease burden
2. **Compare** the socioeconomic, demographic, political, and environmental factors to disease risk of populations across historic and current pandemics
3. **Evaluate** and **critique** personal beliefs and behaviors, current challenges of preventing the global spread of disease, and how disease risk differs across international communities
4. **Explore** the role of climate change on human health and potential pathogen spread
5. **Discuss** the benefits and drawbacks to medical, social, and education interventions used to slow or stop the spread of pandemic pathogens
6. **Compare** global preparedness plans for past and present disease outbreaks to develop a response plan for the next pandemic

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. Coursework & Schedule

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### 1. List of Graded Work

Assignment	Description	Percent of Grade
Weekly quizzes	Students will complete a weekly 5-question multiple-choice quiz on Canvas that will test their understanding of the assigned video.	10%
Reading homework	Students will write a 25-word summary for one article in each set of assigned readings throughout the semester.	5%
Exams (x3)	Two short (one-period) tests will be administered at the end of the first and second units. The final comprehensive exam will be administered during finals week. Each of the exams will comprise a mix of multiple choice, short answer, diagramming, and short essay responses.	30%
In-class activities	Most Wednesday class periods will include an in-class activity, to be completed either as a group or individually. All students are expected to fully participate in each activity and abide by the classroom group-work guidelines. <b>**All members of a group will receive the same score for graded group activities and projects unless otherwise noted in the activity. Each group will complete a peer evaluation to ensure appropriate participation by all group members. Peer evaluations are required, but are not graded.</b>	25%
Final presentation	A group presentation that designs the next pandemic and the global response plan. In-class collaboration time is provided during week 13. <b>**All members of a group will receive the same score for graded group activities and projects unless otherwise noted in the activity. Each group will complete a peer evaluation to ensure appropriate participation by all group members. Peer evaluations are required, but are not graded.</b>	10%
Discussion leader	Students will participate fully in discussions, and will lead specific discussions in groups by presenting a short summary of the discussion topic (<5 minutes), and introducing questions based on the provided readings, for the class to explore. Students will be assigned a date and a specific discussion topic to lead following the drop/add date once the number of students in the class is finalized.	10%
Class participation	In addition to participating in online posts/discussions on Canvas, all students are expected to participate in class discussions according to the course guidelines. A rubric for class participation can be found below	5%
Reflection	Students will periodically reflect on course themes and their personal beliefs and biases by composing a short reflection	5%

## 2. Weekly Course Schedule

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

Week/ Date	Activity	Topic/Assignment (Question/Subject)
Week 1 Jan 11 - 15	Topic	<u><i>Start of Unit 1: Historic Pandemics</i></u> INTRODUCTION TO PANDEMICS
	Summary	<b>Monday</b> introduction to the course <b>Wednesday</b> lecture defining what a disease is, how it becomes an epidemic or a pandemic, and a summary of agents of disease <b>Friday</b> lecture with a brief introduction to the social, political, and economic facets of disease
	Readings/Works	<b>Read</b> "Agents of Disease" (14 pages; adapted from <a href="#">EDC's Exploring Infectious Disease</a> ) <b>Read</b> Senthilingam, M. (2017). Seven reasons we're at more risk than ever of a global pandemic. <i>CNN</i> , available at: <a href="http://www.cnn.com/2017/04/03/health/pandemic-risk-virus-bacteria/index.html">www.cnn.com/2017/04/03/health/pandemic-risk-virus-bacteria/index.html</a>
	Assignment	Compose a 25-word summary for "Agents of Disease"
Week 2	Topic	PLAGUE
	Summary	<b>Monday</b> no class (University holiday) <b>Wednesday</b> lecture on plague with an introduction to the three documented plague pandemics (Justinian, Black Death, and Modern). <b>Friday</b> "tempting fate" card game activity simulation of the social, political, and economic impacts of the Black Death.
	Readings/Works	<b>Read</b> Cohn, S. (2008). 4 Epidemiology of the Black Death and Successive Waves of Plague. <i>Medical History</i> , 52(S27), 74-100. doi:10.1017/S0025727300072100 <b>Watch</b> Documentary: Timeline "The Great Plague" <a href="https://www.youtube.com/watch?v=HPe6BgzHWY0">https://www.youtube.com/watch?v=HPe6BgzHWY0</a> (77 mins)
	Assignment	1. Compose a 25-word summary for Cohn (2008)
		2. Watch plague documentary and complete quiz on Canvas

Week/ Date	Activity	Topic/Assignment (Question/Subject)
		3. Guided reflection
Week 3	Topic	INFLUENZA
	Summary	<b>Monday</b> lecture on influenza biology, introducing the idea of antigenic drift vs shift. Brief overview of the differences between seasonal flu and a pandemic flu. <b>Wednesday</b> activity on the Spanish Flu pandemic <b>Friday</b> Instructor led discussion
	Readings/Works	<b>Read</b> Webster, R.G., and Walker, E.J. (2004). Influenza. <i>American Scientist</i> 91: 122–129. <b>Watch</b> Documentary: The 1918 Influenza Pandemic in America – Struggle Against the Spanish Flu <a href="https://www.youtube.com/watch?v=IOjuBE-ra3A">https://www.youtube.com/watch?v=IOjuBE-ra3A</a> (57 mins)
	Assignment	1. Compose a 25 word summary of Webster and Walker (2004)
		2. Watch flu documentary and complete quiz on Canvas
Week 4	Topic	SMALLPOX
	Summary	<b>Monday</b> lecture on smallpox, specifically about how it is a vaccination success story in controlling a pandemic <b>Wednesday</b> smallpox activity <b>Friday</b> student-led discussion on bioterrorism and the ethics of disease
	Readings/Works	<b>Read</b> Henderson, D.A. (2011). The eradication of smallpox – An overview of the past, present, and future. <i>Vaccine</i> 29S: D7-D9. <b>Read</b> 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: 264-266. <b>Watch</b> Ted Talk by Dr. Larry Brilliant on the global smallpox vaccination effort <a href="https://www.ted.com/talks/larry_brilliant_my_wish_help_me_stop_pandemics">https://www.ted.com/talks/larry_brilliant_my_wish_help_me_stop_pandemics</a> (26 mins)
	Assignment	1. Compose a 25 word summary for either Henderson (2011) or Tognotti (2010)
		2. Watch the assigned Ted Talk and complete quiz on Canvas

Week/ Date	Activity	Topic/Assignment (Question/Subject)
		3. Guided reflection
Week 5	Topic	EXAM WEEK
	Summary	<b>Monday</b> unit summary (historic pandemics) <b>Wednesday</b> exam review <b>Friday</b> exam
	Readings/Works	None
	Assignment	1. Post as least 2 questions you have about the unit to Canvas
		Optional: Post any additional questions you have to Canvas
Week 6	Topic	<u><i>Start of Unit 2: Current Pandemics</i></u> VACCINATIONS (MEASLES AND DENGUE)
	Summary	<b>Monday</b> lecture on measles, how it is a vaccination failure story throughout the world <b>Wednesday</b> vaccination case study (Dengvaxia in the Philippines) <b>Friday</b> vaccination gallery walk activity for a class-compiled vaccination timeline
	Readings/Works	<b>Watch</b> Documentary: Dengue: The hunt for a vaccine <a href="https://www.youtube.com/watch?v=xnPK8vPNMfY">https://www.youtube.com/watch?v=xnPK8vPNMfY</a> (45 mins) <b>Read</b> Fatima, K., & Syed, N. I. (2018). Dengvaxia controversy: impact on vaccine hesitancy. <i>Journal of Global Health, 8</i> (2), 010312. doi:10.7189/jogh.08-020312 <b>Read</b> ABC: Samoa shuts schools and declares emergency ( <a href="https://abcnews.go.com/Health/wireStory/samoa-shuts-schools-declares-emergency-measles-kills-67095260">https://abcnews.go.com/Health/wireStory/samoa-shuts-schools-declares-emergency-measles-kills-67095260</a> )
	Assignment	1. Watch dengue documentary and complete quiz on Canvas
		2. Compose a 25 word summary for Fatima and Syed (2018)
		3. Prepare a single slide on an assigned event in vaccine development history for the gallery walk

Week/ Date	Activity	Topic/Assignment (Question/Subject)
Week 7	Topic	COVID-19
	Summary	<p><b>Monday</b> Lecture on COVID-19 and what makes a modern pandemic.</p> <p><b>Wednesday</b> Activity: Exploring disease modeling – how can we stop a pandemic?  <a href="https://www.color.com/covid-19-outbreak-model">https://www.color.com/covid-19-outbreak-model</a></p> <p><b>Friday</b> Discussion with follow up questions from the activity above</p>
	Readings/Works	<p><b>Watch</b> “The role of applied math in real-time pandemic response: How basic disease models work” by Dr. Nina Fefferman (recording and slides available via <a href="https://www.youtu.be">NIMBioS</a>)  <a href="https://www.youtube.com/watch?v=Ewuo_2pzNNw&amp;feature=youtu.be">https://www.youtube.com/watch?v=Ewuo_2pzNNw&amp;feature=youtu.be</a> (84 mins)</p> <p><b>Explore</b> New York Times “How the Virus Won” interactive story:  <a href="https://www.nytimes.com/interactive/2020/us/coronavirus-spread.html">https://www.nytimes.com/interactive/2020/us/coronavirus-spread.html</a></p> <p><b>Read</b> Walker, P. G., Whittaker, C., Watson, O. J., Baguelin, M., Winskill, P., Hamlet, A., ... &amp; Thompson, H. (2020). The impact of COVID-19 and strategies for mitigation and suppression in low-and middle-income countries. <i>Science</i>. 369: 413-422.</p>
	Assignment	1. Watch Dr. Fefferman’s webinar and complete quiz on Canvas
		2. Compose a 25-word summary for Walker et al. (2020).
		3. Guided reflection
Week 8	Topic	CHOLERA
	Summary	<p><b>Monday</b> lecture on cholera and how a historic pandemic made a comeback in current times</p> <p><b>Wednesday</b> activity on how geographic patterns can be analyzed to identify the source of an epidemic</p> <p><b>Friday</b> student-led discussion on the activity and documentary</p>
	Readings/Works	<p><b>Watch</b> Ted Talk by journalist Rose George “Let’s talk crap. Seriously.”  <a href="https://www.ted.com/talks/rose_george_let_s_talk_crap_seriously">https://www.ted.com/talks/rose_george_let_s_talk_crap_seriously</a> (14 mins)</p> <p><b>Read</b> NPR: Why is cholera making headlines in 2019?  <a href="https://www.npr.org/sections/goatsandsoda/2019/04/02/707994461/cholera-101-why-this-ancient-disease-">https://www.npr.org/sections/goatsandsoda/2019/04/02/707994461/cholera-101-why-this-ancient-disease-</a></p>

Week/ Date	Activity	Topic/Assignment (Question/Subject)
		<a href="https://www.ajtmh.org/doi/10.4269/ajtmh.2012.11-0597">is-making-headlines-in-2019?utm_medium=social&amp;utm_source=twitter.com&amp;utm_term=nprnews&amp;utm_campaign=npr</a> <b>Read</b> Chunara, R., Andrews, J. R., & Brownstein, J. S. (2012). Social and news media enable estimation of epidemiological patterns early in the 2010 Haitian cholera outbreak. <i>The American journal of tropical medicine and hygiene</i> , 86(1), 39–45. doi:10.4269/ajtmh.2012.11-0597
	Assignment	1. Watch Rose George’s Ted Talk and complete quiz on Canvas
		2. Compose a 25-word summary for Chunara et al. (2012)
		3. Guided reflection
Week 9	Topic	OBESITY
	Summary	<b>Monday</b> lecture on obesity, a different way of thinking about pandemics, and how it is not just an American problem <b>Wednesday</b> food desert activity to propose creative solutions to food deserts <b>Friday</b> student-led discussion on diseases of poverty
	Readings/Works	<b>Watch</b> Documentary: HBO Docs “Weight of the Nation: Poverty and Disease” <a href="https://www.youtube.com/watch?v=7MJnm5X9NN0">https://www.youtube.com/watch?v=7MJnm5X9NN0</a> (25 mins) <b>Read</b> Roth, J., Qiang, X., Marbán, S.L., Redelt, H. and Lowell, B.C. (2004), The Obesity Pandemic: Where Have We Been and Where Are We Going? <i>Obesity Research</i> , 12: 88S-101S. doi: <a href="https://doi.org/10.1038/oby.2004.273">10.1038/oby.2004.273</a>
	Assignment	1. Watch obesity documentary and complete quiz on Canvas
		2. Compose 25 word summary for Roth et al. (2004)
		3. Guided reflection
Week 10	Topic	EXAM WEEK
	Summary	<b>Monday</b> unit summary (current pandemics) <b>Wednesday</b> exam review <b>Friday</b> exam



Week/ Date	Activity	Topic/Assignment (Question/Subject)
	Readings/Works	None
	Assignment	1. Post as least 2 questions you have about the unit to Canvas
		Optional: Post any additional questions you have to Canvas
Week 11	Topic	<u><i>Start of unit 3: Future pandemics</i></u> CLIMATE AND DISEASE
	Summary	<b>Monday</b> lecture on climate impacts for disease and other health factors <b>Wednesday</b> activity co-led by a UF Geography climate scientist <b>Friday</b> Student-led discussion on extreme weather and disease
	Readings/Works	<b>Watch</b> CDC Grand Rounds “Climate change and health – From science to practice” <a href="https://www.youtube.com/watch?v=6V_0JaE2Gz0">https://www.youtube.com/watch?v=6V_0JaE2Gz0</a> (59 mins) Reading(s) will be assigned by guest lecturer Example reading: Berry, P., Enright, P. M., Shumake-Guillemot, J., Villalobos Prats, E., & Campbell-Lendrum, D. (2018). Assessing health vulnerabilities and adaptation to climate change: A review of international progress. <i>International Journal of Environmental research and public health</i> , 15: 2626. (25 pp.) Example reading: Ford, J. D. (2012). Indigenous health and climate change. <i>American journal of public health</i> , 102(7), 1260-1266.
	Assignment	1. Compose 25 word summary for TBD reading from guest lecturer
		2. Watch CDC Grand Rounds video and complete quiz on Canvas
		3. Guided reflection
Week 12	Topic	EBOLA
	Summary	<b>Monday</b> lecture on Ebola and international response to ongoing outbreaks <b>Wednesday</b> activity of a virtual interactive learning experience designed to help better understand the factors contributing to the infection and spread of Ebolaviruses <b>Friday</b> student-led discussion on diseases in the media

Week/ Date	Activity	Topic/Assignment (Question/Subject)
	Readings/Works	<p><b>Watch</b> Documentary: PBS “Spillover: Zika, Ebola &amp; Beyond” <a href="https://www.pbs.org/spillover-zika-ebola-beyond/home/">https://www.pbs.org/spillover-zika-ebola-beyond/home/</a> (56 mins)</p> <p><b>Read</b> New York Times “Ebola fallacies” <a href="https://www.nytimes.com/2014/10/24/us/fallacies-are-spreading-as-readily-as-the-virus-has.html">https://www.nytimes.com/2014/10/24/us/fallacies-are-spreading-as-readily-as-the-virus-has.html</a></p> <p><b>Read</b> New York Times “Ebola virus outbreak” <a href="http://www.nytimes.com/interactive/2014/07/31/world/africa/ebola-virus-outbreak-ga.html">www.nytimes.com/interactive/2014/07/31/world/africa/ebola-virus-outbreak-ga.html</a></p> <p><b>Read</b> Kilgo, D. K., Yoo, J., &amp; Johnson, T. J. (2018). Spreading Ebola panic: Newspaper and social media coverage of the 2014 Ebola health crisis. <i>Health communication</i>. 34: 811-817.</p> <p><b>Watch</b> Wired video “Disease expert breaks down pandemic scenes from film and TV” <a href="https://www.youtube.com/watch?v=feGHmv_eDcw&amp;feature=youtu.be">https://www.youtube.com/watch?v=feGHmv_eDcw&amp;feature=youtu.be</a> (22 mins)</p>
	Assignment	1. Watch PBS documentary and complete quiz on Canvas
		2. Compose 25 word summary for one of the NYT articles
		3. Watch Wired video
Week 13	Topic	FINAL PROJECT WORK TIME
	Summary	<p><b>Monday</b> and <b>Wednesday</b> group work time to design the next pandemic and the global response plan (these two days of group work time are considered a single activity for the grading scheme)</p> <p><b>Friday</b> group presentations (design and timing of presentations will be determined by class size)</p>
	Readings/Works	None
	Assignment	Group presentations
Week 14	Topic	ZOMBIES
	Summary	<p><b>Monday</b> lecture on zombies in the real world</p> <p><b>Wednesday</b> activity simulation of zombie types and possible interventions to stop the zombie apocalypse</p> <p><b>Friday</b> student-led discussion on diseases in pop culture</p>

Week/ Date	Activity	Topic/Assignment (Question/Subject)
	Readings/Works	<p><b>Read</b> Munz, P., Hudea, I., Imad, J., &amp; Smith?, R. J. (2009). When zombies attack!: mathematical modelling of an outbreak of zombie infection. Infectious disease modelling research progress, 4, 133-150.</p> <p><b>Listen</b> NPR interview with Robert Smith? "<a href="#">Who will win in human, zombie war?</a>" (3 mins)</p> <p><b>Read</b> CDC "Zombie Pandemic" (graphic novel)  <a href="https://www.cdc.gov/cpr/zombie/00_docs/zombie_pandemic.pdf">https://www.cdc.gov/cpr/zombie/00_docs/zombie_pandemic.pdf</a> (36 pages)</p>
	Assignment	1. Read Munz et al. (2009) and listen to the NPR interview to complete quiz on Canvas
		2. Guided reflection
Week 15	Topic	EXAM WEEK
	Summary	<p><b>Monday</b> unit summary (future pandemics)</p> <p><b>Wednesday</b> exam review</p> <p><b>Friday</b> no class (reading days). Final Exam will occur during finals week</p>
	Readings/Works	None
	Assignment	1. Post as least 2 questions you have about the unit to Canvas
		Optional: Post any additional questions you have to Canvas
Finals week	Final	CUMULATIVE FINAL EXAM SCHEDULED FOR APRIL 29 <sup>TH</sup> 10AM-12PM

## III. Grading

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### 3. Statement on Attendance and Participation

#### Attendance and Participation:

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/UGRD/academic-regulations/attendance-policies/>

- **Attendance:** will be taken daily. Attendance and participation are critical to successful completion of this course. You are allowed one “personal day” for the semester, after which each absence that does not meet university criteria for “excused” will result in a two-point deduction from your final grade.
- **Participation:** Consistent informed, thoughtful, and considerate class participation is expected and will be evaluated using the rubric below. The instructor will inform you of your participation grade to date when mid-term exams are returned and schedule a conference if you are earning below 70% of the possible points.
- **NOTE:** If you have personal issues that prohibit you from joining freely in class discussion, e.g., shyness, language barriers, etc., see the instructor as soon as possible to discuss alternative modes of participation.

#### Participation Grading Rubric:

	High Quality	Average	Needs Improvement
Informed: Shows evidence of having done the assigned work. This includes class preparation (i.e. posting questions to Canvas prior to class)			
Thoughtful: Shows evidence of having understood and considered issues raised.			
Considerate: Takes the perspective others into account.			

## 4. Grading Scale

For information on how UF assigns grade points, visit: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

<b>A</b>	<b>A-</b>	<b>B+</b>	<b>B</b>	<b>B-</b>	<b>C+</b>	<b>C</b>	<b>C-</b>	<b>D+</b>	<b>D</b>	<b>D-</b>	<b>E</b>
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)

## V. General Education and Quest Objectives & SLOs

### 7. This Course's Objectives—Gen Ed Primary Area and Quest

#### Biological Sciences + Quest 2 + Course Objectives

<b>Biological Sciences Objectives →</b>	<b>Quest 2 Objectives →</b>	<b>This Course's Objectives → (This course will....)</b>	<b>Objectives will be Accomplished By: (This course will accomplish the objective in the box at left by...)</b>
Biological science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the life sciences.	Address in relevant ways the history, key themes, principles, terminologies, theories, or methodologies of the various social or biophysical science disciplines that enable us to address pressing questions and challenges about human society and/or the state of our planet.	... explore the socioeconomic, demographic, political, and environmental factors related to disease risk across populations	... examining pandemic pathogens and their impacts on policy, populations, and society through student-led discussions and in-class activities
Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern biological systems.	Present different social and/or biophysical science methods and theories and consider how their biases and influences shape pressing questions about the human condition and/or the state of our planet.	... discuss the benefits and drawbacks to medical, social, and education interventions used to slow or stop the spread of pandemic pathogens	... connecting successful and unsuccessful disease interventions to future preparedness planning via student-led discussions and group activities

<b>Biological Sciences Objectives →</b>	<b>Quest 2 Objectives →</b>	<b>This Course's Objectives →</b> (This course will....)	<b>Objectives will be Accomplished By:</b> (This course will accomplish the objective in the box at left by...)
Students will formulate empirically-testable hypotheses derived from the study of living things, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.	Enable students to analyze and evaluate (in writing and other forms of communication appropriate to the social and/or biophysical sciences) qualitative or quantitative data relevant to pressing questions concerning human society and/or the state of our planet.	... compare global preparedness plans for past and present disease outbreaks to develop a response plan for the next pandemic	... communicating inquiry results as written reports and group presentations
Biological science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the life sciences.	Analyze critically the role social and/or the biophysical sciences play in the lives of individuals and societies and the role they might play in students' undergraduate degree programs.	... evaluate and critique personal beliefs and behaviors, current challenges of preventing the global spread of disease, and how disease risk differs across communities	... reflecting on personal beliefs, biases, and experiences with disease and how they relate to data and examples presented in class through guided written reflections
	Explore or directly reference social and/or biophysical science resources outside the classroom and explain how engagement with those resources complements classroom work.	... explore the role of climate change on human health and potential pathogen spread	... interpret real-world climate and disease data with guidance from expert testimony and case studies

## 8. This Course's Student Learning Outcomes (SLOs)—Gen Ed Primary Area and Quest

### Biological Sciences + Quest 2 + Course SLOs

	<b>Biological Sciences SLOs</b> → Students will be able to...	<b>Quest 2 SLOs</b> → Students will be able to...	<b>This Course's SLOs</b> → Students will be able to...	<b>Assessment</b> Student competencies will be assessed through...
<b>Content</b>	<b>Identify, describe, and explain</b> the basic concepts, theories and terminology of natural science and the scientific method; the major scientific discoveries and the impacts on society and the environment; and the relevant processes that govern biological and physical systems.	<b>Identify, describe, and explain</b> the cross-disciplinary dimensions of a pressing societal issue or challenge as represented by the social sciences and/or biophysical sciences incorporated into the course.	<b>DISCUSS</b> and <b>DESCRIBE</b> fundamental concepts relating to disease outbreaks through human history; <b>EXPLAIN</b> how diseases can become pandemics by exploring how emergence interacts with the landscape from ecological, demographic and climate perspectives.	Three exams, weekly student-led discussion, and a final group presentation
<b>Critical Thinking</b>	<b>Formulate empirically-testable hypotheses</b> derived from the study of physical processes or living things; apply logical reasoning skills effectively through scientific criticism and argument; and apply techniques of discovery and critical thinking effectively to solve scientific problems and to evaluate outcomes.	<b>Critically analyze</b> quantitative or qualitative data appropriate for informing an approach, policy, or praxis that addresses some dimension of an important societal issue or challenge.	<b>ANALYZE AND INTERPRET</b> the impact of socioeconomic, environmental, political, and demographic factors on the risk and spread of a disease through a global population; <b>SYNTHESIZE</b> course lectures, class discussions and group activities to develop a global response plan for a pandemic.	Group activities and a final project presentation

	<b>Biological Sciences SLOs</b> → Students will be able to...	<b>Quest 2 SLOs</b> → Students will be able to...	<b>This Course's SLOs</b> → Students will be able to...	<b>Assessment</b> Student competencies will be assessed through...
<b>Communication</b>	Communicate scientific knowledge, thoughts, and reasoning clearly and effectively.	<b>Develop and present</b> , in terms accessible to an educated public, clear and effective responses to proposed approaches, policies, or practices that address important societal issues or challenges.	<b>DEVELOP AND PRESENT</b> novel solutions for real-world problems; <b>EXPLAIN</b> key scientific findings in written, oral, and visual formats.	Weekly group activities and discussions, and a final project presentation
<b>Connection</b>	N/A	<b>Connect course content</b> with critical reflection on their intellectual, personal, and professional development at UF and beyond.	<b>ARTICULATE AND CRITIQUE</b> their own personal beliefs and behaviors related to the spread of disease and potential future pandemics.	Guided reflections, class discussion, and group activities

## 9. Secondary Objectives and SLOs

### International Objectives (for N co-designation)

<b>International Objectives</b> →	<b>This Course's Objectives</b> → (This course will....)	<b>Objectives will be Accomplished By:</b> (This course will accomplish the objective in the box at left by...)
International courses promote the development of students' global and intercultural awareness.	... explore the interrelatedness of globalization and socioeconomic risk factors on disease burden	... examining the risk factors of disease emergence across cultures and societies throughout human history
Students examine the cultural, economic, geographic, historical, political, and/or social experiences and processes that	... compare the socioeconomic, demographic, political, and environmental	... connecting biological pathogen characteristics to geographic spread, social implications, and economic impacts of historic and current



<b>International Objectives →</b>	<b>This Course's Objectives → (This course will...)</b>	<b>Objectives will be Accomplished By:</b> (This course will accomplish the objective in the box at left by...)
characterize the contemporary world, and thereby comprehend the trends, challenges, and opportunities that affect communities around the world.	factors to disease risk across populations across historic and current pandemics	pandemics to predict how a changing population will react to the next pandemic
Students analyze and reflect on the ways in which cultural, economic, political, and/or social systems and beliefs mediate their own and other people's understanding of an increasingly connected world.	... evaluate and critique personal beliefs and behaviors, current challenges of preventing the global spread of disease, and how disease risk differs across international communities	... reflecting on personal beliefs, biases, and experiences with disease and how they compare to their classmates' and populations across the world

### International Student Learning Outcomes (for N co-designation)

	<b>International SLOs →</b> Students will be able to...	<b>Course SLOs →</b> Students will be able to...	<b>Assessment</b> Student competencies will be assessed through...
<b>Content</b>	Identify, describe, and explain the historical, cultural, economic, political, and/or social experiences and processes that characterize the contemporary world.	<b>DISCUSS</b> and <b>DESCRIBE</b> fundamental concepts relating to global disease outbreaks through human history with regards to socioeconomic, cultural, and biological aspects of disease transmission	Three exams, weekly student-led discussion, and a final presentation
<b>Critical Thinking</b>	Analyze and reflect on the ways in which cultural, economic, political, and/or social systems and beliefs mediate understandings of an increasingly connected contemporary world.	<b>REFLECT</b> on the impact of socioeconomic, environmental, political, and demographic factors on the risk and spread of a disease through a global population	Group activities, student-led discussions, and guided reflections

## VI. University Policies

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### 10. 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.

### 11. 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/>.

### 12. 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.

### 13. Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

### 14. 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.

## **15. Virtual Classroom Environment Policy**

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.