



# HANYANG UNIVERSITY

## Hanyang International Summer School

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Course Information	Class No.	18022	Course Code	ISS1230	Credits	3
	Course Name	Outbreak				
	Lecture Schedule	Mon through Sat / 1:00 PM - 4:00 PM				
	Course Description	Epidemiology is inherently interdisciplinary. We will be exploring disease factors from biological, sociological, and historical perspectives. Students will be guided to investigate issues from multiple perspectives through the use of concept-mapping, Field work, student-driven research, and self-reflection. Each outbreak investigation will begin with student teams concept mapping what they already know about the disease and past or current outbreaks. Teams of students will each be assigned to research and present a talk on a different factor in the spread of the disease (biological, socioeconomic, cultural, etc). Following the lectures, presentations, or case study discussions, concept mapping will be used as a powerful tool to explore and visualize the interconnectedness of all the factors that affect the spread of infectious diseases. There will be significant class time dedicated to student presentations, small group work, and discussion.				
	Course Objective	<p>Upon completion of the course, students will be able to:</p> <ul style="list-style-type: none"> <li>● <b>Select</b> relevant sources of information pertaining to disease outbreak.</li> <li>● <b>Articulate</b> research findings.</li> <li>● <b>Create</b> concept maps that show the interconnectedness of all factors in disease outbreak to <b>explore</b> the intersection of disease biology and cultural/societal reasons for disease spread.</li> <li>● <b>Evaluate</b> disease outbreaks from multiple perspectives, including the biology of the infectious agent, clinical implications, and social/economic/political factors enabling spread of the disease.</li> <li>● <b>Compare</b> how responses to disease outbreaks may vary based on cultural norms (either due to regional or temporal differences).</li> <li>● <b>Identify</b> environmental and behavioral factors that either mitigate or facilitate the spread of infectious disease.</li> <li>● <b>Analyze</b> a high-density urban environment through a specific public health lens to find real-world examples of these factors.</li> <li>● <b>Develop</b> formal communication skills.</li> </ul>				
	Materials/Textbooks	Access to classroom management system and library resources				

### Evaluation

Component	Weight	Details
<b>Team presentation</b>	<b>15%</b>	20 minute team presentation. Synthesis matrix is included in your grade.
<b>Environmental &amp; Behavioral Risk Assessment 1</b>	<b>5%</b>	
<b>Environmental &amp; Behavioral Risk Assessment 2</b>	<b>10%</b>	
<b>Peer evaluation</b>	<b>5%</b>	Your grade will be based on the quality of your peer evaluations
<b>Written Essay Questions 1</b>	<b>5%</b>	Your submission will be evaluated based on insightfulness and how well you support your claims.
<b>Written Essay Questions 2</b>	<b>10%</b>	Your submission will be evaluated based on insightfulness and how well you support your claims.
<b>Written Essay Questions 3</b>	<b>10%</b>	Your submission will be evaluated based on insightfulness and how well you support your claims.
<b>Final Exam (or Final Project Option)</b>	<b>15%</b>	You will respond to a set of prompts about your learning.
<b>In-class quality of participation</b>	<b>10%</b>	This includes, but is not limited to, in-class activities and class discussions. Your engagement can take multiple forms; do <b>NOT</b> do this! <a href="https://www.tiktok.com/@collegelifeshorts/video/7279524945082830122">https://www.tiktok.com/@collegelifeshorts/video/7279524945082830122</a>
<b>Attendance</b>	<b>15%</b>	

### Hanyang University Grading Scale

95 ≥ A+ ≥ 100  
 90 ≥ A ≥ 95  
 85 ≥ B+ ≥ 90  
 80 ≥ B ≥ 85  
 75 ≥ C+ ≥ 80  
 70 ≥ C ≥ 75  
 etc

I do not round up grades.

### Course Policies

**Computers** should be brought to class to be used when the activity would benefit from the use. Communication devices (text, email, etc) may not be used during class without permission. ***You should not have your laptop open when someone is addressing the class - take notes on paper if needed.***

**Office Hours:** I'm happy to meet with you by appointment. In your **email\*** request, provide a brief description of what you would like to accomplish during the meeting. In the context of study abroad, I prefer to discuss student questions or concerns during a dedicated meeting, rather than during outings or social times unless we have no other option.

\*Please note that it is difficult for me to keep up with text messages since there is no way for me to sort and categorize them. Communication with me about class should be sent by email, not text, unless it is an unexpected emergency that requires immediate attention - in that case, email AND text.

**Group work:** It is possible that not all students in a group project will receive the same grade, based on peer evaluations, instructor observations, and attendance.

**Attendance:** Attendance is mandatory. Excused absences will follow Hanyang University policy. For emergency excused absences, the student must schedule a meeting with the instructor to plan an appropriate make-up activity. In the event of an excused absence, make-up work will be determined on a case-by-case basis.

Unexcused absences will receive a zero on any assignment due or completed in class that day and may impact the class participation grade and/or your team presentation grade if you miss a group work day. The attendance grade will be calculated as follows:

100%= no unexcused absences

80%=one unexcused absence

50%=two unexcused absences

10%=three unexcused absences

0%=four or more unexcused absences

Excessive or repeated tardiness will also result in **deduction of attendance points at the discretion of the instructor.**

\*Note that HISS requires faculty to report student absences. More than 5 unexcused absences results in class failure.

**Daily Lecture Plan** - subject to modification depending on topics selected - due dates of presentations and exam will not be changed except in extreme circumstances.

*Guest lecture date subject to change.*

Session	Topics/Activities	Homework assigned (due next period unless otherwise indicated)
Week 1 Tuesday	<p><b>Introductions/name tents/ice-breaker</b></p> <p><b>Lecture</b> - Syllabus and course structure Assignment expectations and rubrics Timeline of select outbreaks around the world (significant focus on East Asia, US, Europe, and Sub Saharan Africa)</p> <p><i><b>In class activity</b> - in groups, concept map infectious disease outbreak components</i></p> <p><b>Lecture</b> - How do vaccines work? Herd Immunity? When does or doesn't vaccination lead to herd immunity?</p> <p><i><b>In-class writing (Essay 1)</b> - What are the rules surrounding vaccination in your country/state? Should, or under what circumstances should,</i></p>	<p><b>Due today end of period:</b> Essay 1 <i>Should, or under what circumstances should, parents be able to deny vaccination for minor children attending public school? What means of enforcement are acceptable? Include the strengths and challenges of your ideas.</i></p>



	<i>parents be able to deny vaccination for minor children attending public school?</i>	
Week 1 Wednesday	<p><b>In-class Discussion</b> - Discussion of Essay 1 topic. Did discussion change or strengthen your existing views on vaccination?</p> <p><b>Lecture</b> - Bubonic Plague: Justinian Plague, Black Death, The Silk Road &amp; Yuan Dynasty, later pandemics, biology, superstitions, treatment</p> <p><b>In-class Discussion</b> - What were some of the superstitions/magic thinking that occurred during the plague. Did you notice anything similar during the COVID pandemic? Why do you think humans do this?</p>	
Week 1 Thursday	<p><b>Lecture:</b> Smallpox and development of the smallpox vaccine. Examples of topics related to smallpox that you might want to delve into.</p> <p><b>In-class discussions -</b></p> <ul style="list-style-type: none"> <li>• With respect to the development of the smallpox vaccine, did the end justify the means?</li> <li>• Smallpox is the only infectious disease that has been eradicated by widespread vaccination. What are the features unique to smallpox that allowed this to be successful?</li> </ul> <p><b>Lecture</b> - Cholera, John Snow, and the Broad Street Pump: the birth of epidemiology</p>	
Week 1 Friday	<p><b>View</b> the film <i>Contagion</i></p> <p><b>In-class individual writing-</b> In what ways did the film mirror the COVID pandemic where you live, and in what ways did it differ?</p> <p><b>In-class discussion</b> -Brainstorm presentation topics, rank preferences</p>	
Week 1 Saturday	<b>Environmental &amp; Behavioral Risk Assessment 1: Pick your own field trip</b>	<b>Due today:</b> Presentation assignment preference form (if you want your preferences considered)



<p>Week 2 Monday</p>	<p><b>In-class activity:</b> Teams/individuals work on Risk &amp; Resilience Maps</p> <p><b>Student Informal Presentations:</b> Risk &amp; Resilience Maps</p> <p><b>In-class writing (Essay 2) followed by discussion:</b> See prompts in assignment guide.</p> <p><b>Lecture</b> - Public speaking tips, rubric, slide tools, and Synthesis Matrix</p> <p><b>Presentations assigned</b></p>	<p><b>Due today:</b> risk &amp; resilience maps. You will have time in class to work on this, but you must bring coordinates and notes about each coordinate.</p>
<p>Week 2 Tuesday</p>	<p><b>In-class activity-</b> Teams will begin work on their presentations. You will begin researching and brainstorming to create a rough concept map of your main ideas and receive feedback from the class.</p>	<p><b>Due today:</b> Essay 2</p>
<p>Week 2 Wednesday</p>	<p><b>In-class activity-</b> Teams will work on their presentations. Individual team meetings with instructor (teams should be prepared with a rough outline or concept map and synthesis matrix draft)</p>	<p><b>Due today end of period:</b> Presentation outline or concept map <b>and</b> Synthesis matrix draft (show me, no submission)</p> <p><b>Due today end of day:</b> Project proposals due</p>
<p>Week 2 Thursday</p>	<p><b>Student Presentations:</b> Teams 1-3 (example topics)</p> <ul style="list-style-type: none"> <li>● Smallpox: Impact of and on Imjin war - include a brief history lesson about the Imjin War</li> <li>● Insect-borne diseases and climate change (malaria, dengue, etc)</li> <li>● Plant pathogens, human health, and colonialism: comparing the Bengal famine (rice) and the Irish potato famine</li> </ul> <p>*Ask a classmate to record your presentation.</p> <p><b>In-class Writing (Essay 3) and Discussion -</b></p> <ol style="list-style-type: none"> <li>1. Today you learned how infectious disease played a possible role in the outcome and aftermath of the Imjin War and impacts on the Yuan and Ming Dynasties. What political or cultural changes have you observed that you believe may be related to the COVID pandemic? Do you think these are positive, negative, or neutral changes?</li> </ol>	<p><b>Due today before class start:</b> All groups must submit their presentation and synthesis matrix by the start of this class period, regardless of presentation day. Presenting teams will be selected randomly, day of.</p>



<p>Week 2 Friday</p>	<p><b>Student Presentations:</b> Teams 4-6 (example topics)</p> <ul style="list-style-type: none"> <li>● Cholera: overall history of cholera with focus on current areas of prevalence and prevention measures</li> <li>● Anti-vaccination history</li> <li>● Origin and spread of the “Spanish Flu”</li> </ul> <p>*Ask a classmate to record your presentation.</p> <p>Work on peer evaluations if time allows.</p>	<p><b>Due today:</b> Essay 3</p>
<p>Week 2 Saturday</p>	<p><b>Environmental &amp; Behavioral Risk Assessment 2: Pick your own field trip</b></p>	
<p>Week 3 Monday</p>	<p><b>In-class activity:</b> Teams/individuals work on Risk &amp; Resilience Maps</p> <p><b>Student Informal Presentations:</b> Risk &amp; Resilience Maps</p> <p><b>In-class discussion:</b> <i>How did your experience with this activity differ the second time? Was it easier to pick out risks and mitigating factors? Did you notice a greater number of unique factors?</i></p>	<p><b>Due Today:</b></p> <ul style="list-style-type: none"> <li>● Peer Evaluation Forms</li> <li>● risk &amp; resilience maps. You will have time in class to work on this, but you must have coordinates and notes about each coordinate.</li> </ul>
<p>Week 3 Tuesday</p>	<p><b>Lecture</b> - influenza biology, antigenic shift and drift, ferret gain-of function study</p> <p><b>In-class Discussion</b> - <i>Gain-of-function research benefits and risks. Does/how does the COVID 19 outbreak influence your support or reluctance regarding gain-of-function research?</i></p> <p><b>Lecture</b> - COVID 19 biology, vaccine and drug development, post-COVID syndrome. Individualism (US) vs Collectivism (Korea)</p> <p><b>In-class Discussions</b> - <i>What are the benefits and limitations of individualism and collectivism? How might individualist vs collectivist cultural norms impact responses to infectious disease and public health? Describe an example where you observed either individualist or collectivist values driving action. What were the benefits and limitations of acting in that way? This may, but does not have to be, public health-related. [this might be an exam question]</i></p>	



	<p><i>What questions do you have about the MERS outbreak, COVID outbreak, or any other public health question that you'd like to ask our KDCA guest if there is time.</i></p>	
<p>Week 3 Wednesday</p>	<p>Guest Lecture: TBD <b>Dr. Chaeshin Chu</b> Deputy Scientific Director, Director for International Affairs Managing Editor, Osong Public Health and Research Perspectives Korea Disease Control and Prevention Agency <a href="https://www.kdca.go.kr/index.es?sid=a3">https://www.kdca.go.kr/index.es?sid=a3</a></p> <p><b>OR</b> <b>Guest from</b> Hyundai Bioscience or Lotte Biologics <i>if I can arrange it</i></p> <p><b>Submission &amp; Presentation of Optional Final Projects if there are any.</b></p>	<p><b>Due Today:</b></p> <ul style="list-style-type: none"><li>● Peer Evaluation Forms</li><li>● Final projects if you selected that option instead of the final exam.</li></ul>
<p>Week 3 Thursday</p>	<p><b>Final Exam</b></p>	