

Pandemics: History and Perspectives Molecular and Cell Biology

Syllabus – Spring 2021

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title: MCB 1895-001 Pandemics: History and Perspectives Format: On-line; TuTh 11:00AM - 12:15PM Prerequisites: None Professor: Kenneth Noll Email: kenneth.noll@uconn.edu (I will respond to all questions within 24 hours during weekdays.) Office Hours/Availability: Virtual office hours by appointment.

Course Materials

Required course materials should be obtained before the first day of class.

Required textbooks are available for purchase through the <u>UConn Bookstore</u>, through the use of the Purchase Textbooks tool in HuskyCT), or through another commercial vendor. Textbooks can be shipped (<u>fees apply</u>).

Required Materials: (subject to change as the course develops)

- 1. The Great Influenza: The Epic Story of the Deadliest Plague in History, John M. Barry
- 2. A Journal of the Plague Year, Daniel Defoe
- 3. Eyam, Plague Village, David Paul
- 4. Cholera: The Victorian Plague, Amanda J. Thomas
- 5. Pox: An American History, Michael Willrich
- 6. Black Death at the Golden Gate: The Race to Save America from the Bubonic Plague, David K. Randall
- 7. Articles and other materials posted on the course HuskyCT site

Additional course readings and media are available within HuskyCT, through either an Internet link or Library Resources.

Estimated costs of books (prices at UConn Bookstore as of Dec. 2020)

- 1. The Great Influenza: The Epic Story of the Deadliest Plague in History, \$3.80 \$19.00
- 2. A Journal of the Plague Year, Illustrated,* \$6.70 \$8.95
- 3. Eyam, Plague Village, \$18.70 or \$24.95
- 4. Cholera: The Victorian Plague, \$18.70 \$24.95
- 5. Pox: An American History, \$8.00 \$19.00
- 6. Black Death at the Golden Gate: The Race to Save America from the Bubonic Plague, \$5.40 \$26.95

* This book (not the illustrated version) is in the public domain in the US, so you can get it for free from some commercial vendors or on-line from Project Gutenberg. Beware that some commercial free versions have significant mistaken text in them.

Course Description

A survey of historical pandemics examining their causes, societal and scientific reactions to them, and their consequences. The underlying biology of pathogens will be covered as well as modes of transmission from animals and among humans.

Course Objectives and Goals

Students in the course will gain an appreciation for the fact that humanity has dealt with pandemics before and about responses that worked and those that failed. They will also learn how diseases are caused, and the difference between those caused by bacteria and those caused by viruses. They will also learn how to effectively communicate information about these topics in a clear manner.

My goal for this class is to provide you with historical perspective about what we are now experiencing dealing with the Covid-19 pandemic. Mankind has encountered pandemics throughout its history and I wanted to discuss more recent ones since these more recent events involved many aspects of society that we have today.

Course Outline

Writing assignment schedule

Assignment	1 st draft	2 nd draft	
Indiana University Certificate Due Feb. 11			
1. Post 1	Feb. 11	Feb. 23	
2. Post 2	Feb. 25	Mar. 9	
3. Post 3	Mar. 11	Mar. 23	
4. Post 4	Mar. 25	Apr. 6	
5. Post 5	Apr. 8	Apr. 20	
6. Post 6	Apr. 22	May 4	

All writing assignments are due through SafeAssign by noon on the dates indicated above. If an assignment is not submitted as required, its score will be reduced as described under "Late submissions" in "Grade Calculations" below.

Schedule

Reading schedule

- 1. Influenza: Jan 19-Jan 26, Parts I-III
- 2. Plague Year: Jan 28-Feb 4
- 3. Plague Village: Feb 9-Feb 16
- 4. Cholera: Feb 18-Mar 2
- 5. Pox: Mar 4-Mar 18
- 6. Black Death: Mar 23-Mar 30
- 7. Influenza: Apr 5-27, Parts IV-X

Lecture/Discussion schedule

Date	Book	Section*	In-class topic
Jan 19	1	I	The state of science & medical practice before the modern era
Jan 21	1	II	The state of science & medical practice before the modern era
Jan 26	1	111	The state of science & medical practice before the modern era
Jan 28	2	3-103	Lecture: 17 th century London; bubonic plague attributes
Feb 2	2	103-191	Discussion
Feb 4	2	192-285	Discussion
Feb 9	3	1-3	Lecture: 17 th century rural England
Feb 11	3	4-5	Discussion
Feb 16	3	6-7	Discussion
Feb 18	4	1-2	Lecture: 19 th century England; cholera attributes
Feb 23	4	3-5	Discussion
Feb 25	4	6-8	Discussion
Mar 2	4	9-10	Discussion
Mar 4	5	1-2	Lecture: late 19 th century New York; smallpox attributes
Mar 9	5	3-4	Discussion
Mar 11	5	5	Discussion
Mar 16	5	6-7	Discussion
Mar 18	5	8	Discussion
Mar 23	6	1-4	Lecture: 19th-20th century San Francisco and America
Mar 25	6	5-8	Discussion
Mar 30	6	9-13	Discussion
Apr 1	6	14-18	Discussion
Apr 5	1	IV	Lecture: early 20th century America; influenza & pneumonia attributes
Apr 7	1	V-VI	Discussion
Break			
Apr 20	1	VII	Discussion
Apr 22	1	VIII-IX	Discussion
Apr 27	1	Х	Discussion
Apr 29	Sun	nmary and	final conversations

*Pages in *Plague Year*, Sections in *Influenza*, Chapters in other books.

LECTURES

COPYRIGHT PROTECTION OF LECTURES

Some class sessions will include short lectures to provide background information about the biology of pandemics and the history of the relevant time periods. This may involve the use of some slides. If so, those will be posted on the course HuskyCT site. My lectures, notes, handouts, and displays are protected by state common law and federal copyright law. They are my own original expression and I've recorded them prior or during my lecture in order to ensure that I obtain copyright protection. Students are authorized to take notes in my class; however, this authorization extends only to making one set of notes for your own personal use and no other use. I will inform you as to whether you are authorized to record my lectures at the beginning of each semester. If you are so authorized to record my lectures, you may not copy this recording or any other material, provide copies of either to anyone else, or make a commercial use of them without prior permission from me.

DISCUSSIONS

Each class session will include time to discuss the assigned readings. Each of you will be expected to participate in each of those discussions. A portion of your final grade is based on the frequency and content of your participation. Below is a rubric upon which that grade will be based.

For each discussion you should be prepared to do the following:

- 1. Describe significant events in the assigned reading.
- 2. Describe the roles of significant people in the assigned reading. Be prepared to defend or criticize the actions of these people.
- 3. Describe important societal responses to the pandemic crisis in the assigned reading. Are those responses justifiable given the social and scientific circumstances of that time?
- 4. Discuss the importance of any of the above 3 in the context of this pandemic and other pandemics we have covered to that point.
- 5. Relate the experiences of the people in the pandemic under consideration to those people are experiencing today.

As our readings progress, I will ask you to make connections between the events, people, and social reactions to the pandemics described in each of the books.

You will be called upon at random to answer questions or provide comments. I will use a random number generator to determine who to call on.

JOURNAL

You will keep a journal for each book using the journal feature on HuskyCT. In your journal you should write down thoughts, comments, observations, and questions that arise from your reading. These entries will only be accessible to you and Dr. Noll. These may be used to generate discussions, though Dr. Noll will not reveal who was responsible for raising the question or issue. You will be graded on the frequency and content of your journal entries. You are expected to make **at least three entries** for each book.

WRITING ASSIGNMENTS

Assignments

You will write 6 short articles that will appear as posts on a microbiology website. If your posts are of good enough quality, they will be posted on a microbiology website constructed by Dr. Noll. If a post is used, you will be given credit for writing it or, if Dr. Noll needs to make significant revisions, you will be acknowledged as a contributing author.

Each post will be approximately 500 words following the guidelines described below. These posts will each be a story about a real person who was involved in a pandemic. You can choose a person mentioned in the books we are reading or find a person involved in another pandemic that we do not discuss. Regardless of its source, you need to clear your choice of character with Dr. Noll first. These posts will appear on a web document that will describe elsewhere the pandemic itself (the time frame, the causative agent, details of the extent of the illness, etc), so your writing does not need to cover these aspects.

For each post, you should introduce the person (who they are, their occupation, if relevant) and describe their role in dealing with the pandemic (if relevant) and the impact the pandemic had on their life. You should provide brief histories of their life before and after the pandemic. The goal is to bring the pandemic to life for your reader so they can relate to this person and feel what it must have been like at that time.

You need to use resources outside the assigned books to write your posts. These can be other books, published articles, or websites. Websites need to be based on factual information, not fictional. As such, they should provide the name of person who created the site and any sources that they used to compile the site. An

exception to this last requirement is if the information is contained in an article posted by a legitimate newspaper or magazine. As described below, you must provide the sources you used (references) that you used to write your post.

Each post will be submitted at least twice, as first and second drafts. Subsequent polishing drafts may be requested, but these will not be graded. Each post is worth 10 points. You will get a grade out of 10 for each submission and the final grade for that assignment (out of 10 points) will be calculated as described below.

Requirements for all writing assignments

You will submit the two writing assignments as Microsoft Word documents to SafeAssign. **Do not submit pdf files of your work.** If you use different word processing software, see Dr. Noll before submitting an assignment. Both writing assignments must be typed using the following layout. These requirements will be strictly enforced and points will be deducted if they are not met.

- 12 point Times New Roman font
- double spacing between lines in a paragraph (set to 0 pts between lines)
- 0 pt spacing between paragraphs
- one-inch margins at both sides, top and bottom.

Some word processing programs use a 1¼ inch default setting for side margins, so change this if necessary. I only need your name at the top of the page. Do not include the date, the course name, your social security number or any other extraneous information.

Your posts will be about 500 words long, meaning it must contain a minimum of 450 words and a maximum of 550 words as counted by Microsoft Word. Fewer or more words will count against your grade. This corresponds to about 1½ pages written using these formatting rules.

Due Dates and Late Policy

The time of your submission of your papers will be determined by the time listed on their postings to SafeAssign. Papers turned in after the assigned time will have 1/10 of the assignment's grade deducted. If a paper is turned 24-48 hrs after the due date and time, 1/5 of the assignment's grade will be deducted. No paper will be accepted 48 hrs after the due date and time. *The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.*

Citing references

You can use books, published articles, or websites as sources of information and you must provide citations for all such sources. Provide those citations at the end of your writing under the heading "References" using the following formats. The Reference section is not included in the 300-word requirement.

- Scientific Article: Caserta et al. 2012. In vivo and in vitro analyses of regulation of the pheromone-responsive prgQ promoter by the PrgX pheromone receptor protein. J Bacteriol 194:3386-3394.
- Book: Pandemic: Tracking Contagions, From Cholera to Ebola and Beyond, Sonia Shah. Picador USA. 2017.
- Book Chapter: Fitzgerald G, Shaw D. In Waters AE (ed), Clinical microbiology, in press. EFH Publishing Co., Boston, MA. {Chapter title is optional.}
- Website: Black Death by History.com Editors. July 6, 2020. https://www.history.com/topics/middleages/black-death

Evaluation of writing

In evaluating these writing exercises, I will examine their content, format, appropriateness to the target audience, and grammar. You are expected to meet the word length requirements of all assignments.

Scoring of assignments

A score of 10 points is assigned for both the first draft and second draft. A final score for these assignments will be calculated as follows. A score based on the assignment's total points (10 points) will be provided on the first draft. Another score, also based on the assignment's total points (10 points), will be provided on the second draft. The score of the second draft will be tripled and added to the first draft's score and this sum will be divided by four to give the assignment's total score. This means the first draft counts for one fourth of the final score for the assignment and the second draft counts for three fourths. It is possible to receive a lower score on the second draft than on the first draft if errors are not adequately addressed.

Plagiarism scoring

If evidence of plagiarism is found on any assignment, that assignment will receive a grade of zero points. Dr. Noll reserves the right to change the grade on an assignment to zero if he learns later that it contained plagiarized material.

Discussion Rubric

	Criteria		
Points	2	1	0
Attendance / Promptness	Student is prompt and attends class.	Student is late and attends class.	Student does not attend class.
Level Of Engagement In Class	Student contributes to class by offering ideas and asking questions more than once per class. Student incorporates or builds off of the ideas of others.	Student contributes to class by offering ideas and asking questions once per class.	Student does not contribute to class.
Behavior	Student shows respect for other students and does not display disruptive behavior during class.	Student shows some disrespect of other students or displays slight disruptive behavior during class.	Student shows disrespect or disruptive behavior during class.
Preparation	Student is fully prepared for class with assignments and required reading.	Student is partially prepared for class with assignments and required reading.	Student is not prepared for class.

Grading

FINAL GRADE CALCULATION AND SCALE

Final grade calculation

	total points
Discussion participation*	40
Journal	20
Posts*	40
	100

*The scores of each day or post will be added together and converted to a % of the possible score. This % will be multiplied by 40 to calculate this "total points" value.

Grading Scale:

Grade	Letter Grade	GPA
93-100	A	4.0
90-92	A-	3.7
87-89	B+	3.3
83-86	В	3.0
80-82	B-	2.7
77-79	C+	2.3
73-76	С	2.0
70-72	C-	1.7
67-69	D+	1.3
63-66	D	1.0
60-62	D-	0.7
<60	F	0.0

Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and

academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important <u>standards</u>, <u>policies and resources</u>, which include:

- The Student Code
 - Academic Integrity
 - o Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Plagiarism

1. Indiana University plagiarism Confirmation Certificate

There is a link to the Indiana University "How to Recognize Plagiarism" site on the course homepage. The site has tutorials to teach you to recognize the different kinds of plagiarism. There are links there (Definition, Overview, Cases) that define different types of plagiarism. Many of their examples of plagiarism may not be obvious, so you need to read through this material. There are practice questions that will allow you to receive feedback on your answers. There is a 10-question test that you must take at the end of the instruction. Make sure you take the undergraduate test as the graduate student test is harder and has more questions. You can take the test repeatedly until you get all the questions correctly answered. The site changes the questions for each attempt and you cannot change your answer for each question once you have entered it. Consequently, if you do not pass 9 questions, you have to take a new test.

Once you've passed the test and provided the requested information, you will be sent an email with the Certificate of completion. Scan your signed copy and **send that to Dr. Noll either before or on the due date for your first assignment (Feb. 11).** Assignments will not be graded until a Certificate is turned in. If it is not turned in before the second draft of the first assignment is due, the first assignment will receive a score of zero. No writing assignments after then will be accepted until the Certificate is turned in and each assignment will receive a score of zero.

The course HuskyCT site also has a link to resources at the UConn library that describe plagiarism and give instruction on recognizing it.

2. Plagiarism policy for this course.

In the past there have been misunderstandings about whether it is appropriate to copy material from published sources, internet materials, or other students. Briefly, it is <u>never</u> appropriate to copy anything written by someone else (including other students, published works or internet material). The work you turn in <u>must be in your own words</u>. Do not copy <u>anything</u> from work written by others. All facts and interpretations of facts that are not your own must include a literature citation. When describing factual material, you should describe it in your own words. Do not take phrases from the published work and connect them with your own words. Do not use text from sources and surround it with quotation marks. You need to restate what you read in your own terms. Do not do what is called "creative reiteration" and simply rearrange the words in another author's text and present it as your own. This, too, is plagiarism. It is best to write your paper without looking at the original work to avoid using those authors' words.

Although we will use the SafeAssign software to check for possible plagiarism (see below) the final determination of the authenticity of your writing rests with Dr. Noll. Even if SafeAssign does not recognize copied or "creatively reiterated" material, if Dr. Noll determines that it is unacceptable, that is the final decision.

Academic misconduct in any form is in violation of the University of Connecticut Student Code and will not be tolerated. This includes, but is not limited to copying or sharing answers on assignments, plagiarism, and having someone else do your academic work. If you have any questions about the acceptability of your work regarding plagiarism, contact Dr. Noll <u>before</u> submitting the work. If submitted work is deemed to be in violation of this policy, that assignment will be given a grade of zero points. Subsequent violations will be dealt with according to the guidelines given in The Student Code (see the link at the course HuskyCT site). Depending on the act, the Code stipulates that a student could receive an F grade on the test/assignment, F grade for the course, or could be suspended or expelled. See the UConn plagiarism link on the course HuskyCT site.

Use of SafeAssign

All your writing assignments will be submitted electronically through the SafeAssign software available on the course HuskyCT site. This software checks your paper for plagiarism, from published sources, other students in

the class, or other student papers in the SafeAssign database. It is designed to help you learn about correct usage of information in the literature and proper citation of that information.

You will submit your papers to SafeAssign sites that will check the document against a large database of journal articles and websites as well as papers submitted to the SafeAssign database from UConn and other schools. You will receive a report showing the extent to which your writing matches text in that database. If your score is 15-40, you should examine your paper for possible copying and make necessary changes. If the score is above 40, there may be serious overlap between your work and that of others and you need to address this. SafeAssign provides evidence of possible plagiarism. The final determination of authenticity lies with Dr. Noll.

For each final and draft submission, there is a SafeAssign link. These submissions will come to me and cannot be revoked. These are the submissions that must be made by the deadlines posted in the syllabus. These submissions will be compared with papers submitted by other students in the course to catch within-course copying. Note that your first drafts will not be entered into the database, so your second draft analyses will not be compared to your first drafts by SafeAssign. It is very important that you not share electronic copies of your papers with anyone else so there will be no chance of misunderstandings regarding authorship.

Please do not wait to the last minute to upload your paper to SafeAssign if you have not tested the use of the system beforehand. There can be problems and it can take many, many minutes to process a paper. It is best to use FireFox, Chrome or Explorer to upload to SafeAssign. Safari will block access in its default settings, so you must disable the feature that prevents pop-ups. Word processing software other than Microsoft Word sometimes does not upload properly. It is your responsibility to make sure documents upload properly before the deadlines.

Students with Disabilities

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

Software/Technical Requirements (with Accessibility and Privacy Information)

The software/technical requirements for this course include:

- HuskyCT/Blackboard (<u>HuskyCT/ Blackboard Accessibility Statement</u>, <u>HuskyCT/ Blackboard Privacy</u> Policy)
- Adobe Acrobat Reader (Adobe Reader Accessibility Statement, Adobe Reader Privacy Policy)
- Microsoft Office (free to UConn students through <u>uconn.onthehub.com</u>) (<u>Microsoft Accessibility</u> <u>Statement</u>, <u>Microsoft Privacy Statement</u>)
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).

NOTE: This course has NOT been designed for use with mobile devices.

Help

Technical and Academic Help provides a guide to technical and academic assistance.

This course is completely facilitated online using the learning management platform, <u>HuskyCT</u>. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the <u>Help Center</u>. You also have <u>24x7 Course Support</u> including access to live chat, phone, and support documents.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the <u>Computer</u> <u>Technology Competencies</u> page for more information.

The University of Connecticut is required to verify the identity of students who participate in distance learning or online courses and to establish that students who register in these courses are the same students who participate in and complete the course activities and assessments and receive academic credit. Verification and authentication of student identity in this course will include:

- 1. HuskyCT as the primary repository and access point for course content, assessment, and activities. Students will use their NetID and password process to securely access course content/assessments.
- The instructor will facilitate synchronous class sessions, small group meetings, and individual student meeting discussions using Microsoft Teams. The instructor will confirm student identity via official <u>UConn photo in</u> <u>StudentAdmin</u>.

If you suspect academic misconduct in regard to a breach of your identity or that of another student, follow the University's procedures at <u>https://community.uconn.edu/academic-misconduct/.</u>

Evaluation of the Course

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the <u>Office of Institutional Research and Effectiveness</u> (OIRE).