

**Instructor Information:**

Dr. Dawn Simon

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Office: Bruner Hall of Sciences, Room 201C

Office Hours: MWF 9-10:00 a.m. (via Zoom @<https://unk.zoom.us/j/5401568491>) & other arrangements/times by appointment.

During the week, I check email messages at least twice a day (once in the morning and once in late afternoon) and will usually respond within 24 (weekday) hours. (For example, if you email me on a Friday afternoon, I will typically respond by Monday afternoon.) In special circumstances, responses may be delayed up to 72 hours.

**Course Description:**

Plagues have caused suffering and death for humans for hundreds of years. These events have destroyed economies, ended wars, and changed the course of civilizations. Plagues have been the focus of fables, nightmares, art, and scientific breakthroughs. Attempts to combat the unseen lethal agents have ranged from the superstitious to the latest in scientific advancement. In this course, the history of plagues will be introduced, discussion on the pathogens that cause them and how those pathogens are evolving, and their possible future.

This class has implications in the present world. In the past few decades, there have been several completely new disease organisms that are responsible for epidemics and also changes in “old” infectious agents that are now capable of causing epidemics. Humans have also contributed to changes in infectious disease due to wars, natural disasters, reliance on high-density animal production, failures in public health, and greater population density. We will discuss this human contribution and how we might also reduce the appearance of epidemics...or even if this is possible.

**Course Objectives:**

In this course, students will:

1. Understand the historical background of plague-causing organisms and their effects on humans.
2. Gain knowledge of the origin and evolution of plague organisms.
3. Understand the role of humans on pathogen evolution.
4. Develop critical thinking skills by identifying assumptions of alternative hypotheses and evaluating evidence.
5. Demonstrate the ability to form a coherent evidence-based argument and communicate this in writing.
6. Locate and appropriately use examples from the primary literature.

**Computer Requirements:**

You are required to have frequent access to a computer with internet connectivity. Lectures will require internet access for viewing and I expect you to check the Canvas site several times per week (and preferably every day). Please refer to the eCampus website to make sure you meet the minimum hardware/software and internet connection speed required by all UNK eCampus students. The written portion of exams must be completed using Microsoft Office.

**Course Structure:**

The course consists of recorded lectures, reading assignments, online discussion boards, quizzes and exams. All materials for each week will be posted on the Canvas web site.

This is not a self-paced class. You will be expected to keep up with the pace of the course, and the course structure is designed to help with this. If this is your first distance class, you will find that these classes are fast paced. Everyone in these classes is busy with school, classes, and family. We understand, but if you fall behind, it is difficult to catch up. Please do not procrastinate, and let me know if you have a catastrophe befall you.

### Lectures

Audio lectures and the accompanying .PPT document will be posted in Canvas. (Remember that this information is copyrighted, so it is illegal to copy this material and distribute it without permission.) The accompanying powerpoints are not a substitute for viewing VidGrid lectures and reading papers. The powerpoints will allow you print and further listen to each lecture without the need to frantically copy each word spoken.

### Discussion boards

Discussion boards will begin Monday and run through Sunday of the week. The structure of the discussion boards in this class will likely be different from other classes you have taken. The rationale behind the structure is to incentivize students to take ownership of the discussion. In my experience students learn a lot more when actively engaged in the process. For this reason, the discussion board will be divided into two parts: Participation and Leadership.

Participation: Students will be expected to respond to the discussion questions and to other students' comments. A rubric will be provided, but the following are some general guidelines. The participation grade will be weighted by the quality and number of responses elicited by the student. There will be a total of 10 weeks with a discussion board component and each week will be worth 10 points. You will participate in 9 weeks and lead one week. You will therefore have 100 points for participation. Participation in class will be monitored and graded based on the following general criteria (rubrics will also be provided):

- 1) **Participate at least twice each week on different days.** You should check the discussion board a minimum of every other day and post comments, questions, etc. You are welcome to suggest other readings, websites, and similar materials that may carry discussion and inquiry in new directions. In order to keep a discussion going and to allow everyone to participate in a meaningful way, we need comments to be made throughout the week.
- 2) **The quality of your contribution.** This is somewhat subjective, but the more insightful your comments the better the quality of discussion will be. Your comments should generally consist of a short paragraph. Conciseness and clarity are necessary to keep the workload for this class to a reasonable level so page long postings are discouraged. Your comments should be supported with specific details, referenced, and relevant to the current topic of discussion. Posts about the weather, Canvas issues, or simple posting of a web link are not examples of posts that will count for credit.
- 3) **How well you interact with classmates.** Be nice. These are online discussions of scientific issues. You should read all postings, and you can respond to some of them. Your responses should demonstrate that you are aware of the discussion that has been taking place. Go beyond either simply "I agree" with someone, state your reasons. Be polite and constructive in your posts.

Leadership: I will assign students a week to lead the discussion. You will mostly likely be working in pairs. The two students work together to plan questions/topics of discussion about their assigned epidemic-causing agent. This should include additional research to read, current statistics, and/or the future of their epidemic. This will not begin until Week 4 of class. I will assign students topics at the end of Week 2, as this will allow some time for course enrollment to stabilize. Leadership of discussion will be worth 50 points, so I expect that students will have a good plan and the other students in the class will learn additional information about the epidemic during the discussion.

**Additional Suggestions for Discussion Board:** Most students participate most heavily on the weekends. Discussion topics and information should be posted by the leaders on the weekend before the disease lecture. Students will then participate through Sunday of the next week. (Therefore there will be some overlap. New material will be posted for the next discussion that same weekend for the next topic, but do not start the next discussion until Monday please.)

*Quizzes*

Quizzes over the lecture material and assigned readings will periodically occur over the course of the semester. All quizzes will be time limited as the use of notes is not permitted. The quizzes will take place on Canvas and ample time will be provided to take each quiz after the posting date. Announcements will be made when each quiz is posted.

*Exams*

Reading and understanding of scientific papers is crucial to the way science works. I believe that experience with primary scientific literature is a necessary part of the graduate experience. I will ask you to find and read both popular media and scientific source material. In addition to the core material on plagues, this course is designed to improve critical thinking skills. I expect everyone in the class to be able to read and write papers in scientific style.

Exams must be submitted as a .docx file through the Canvas TurnItIn function, not any other method or file type. Formatting is important for these documents. **Referencing is required!** Plagiarism is a serious offense academically. I will check papers for plagiarism and severe grade reductions can result. If you have any questions, please contact me **before** you turn in any papers.

**Grades:**

| Graded Assignments                  | Points     |
|-------------------------------------|------------|
| Online Discussion (9 @ 10 pts each) | 100        |
| Online Discussion Leading           | 50         |
| Online Quiz (10 @ 10 pts each)      | 100        |
| Exam 1 Midterm                      | 100        |
| Exam 2 Final                        | 100        |
| <b>Class Total</b>                  | <b>450</b> |

*Grading Scale.* Letter grades, using the plus/minus system, will be assigned using the standard grading scale for the Dept. of Biology, as follows: A (93-100%), A- (90-92%), B+ (88-89%), B (83-87%), B- (80-82%), C+ (78-79%), C (73-77%), C- (70-72%), D+ (68-69%), D (63-67%), D- (60-62%), and F (below 60%). Your final

grade will be rounded up (e.g., if you finish with an 82.5% your grade will be a B).

**Additional Information:**

*Academic Integrity*

This course, like all UNK courses, abides by all University policies as outlined in the 2020-21 UNK Student Handbook, which contains the UNK Student Code of Conduct. You will be expected to be familiar with and abide by all such policies. Plagiarism will not be tolerated. You must cite all sources and rephrase content in your own words. You assume full responsibility for the content and integrity of the work you submit. All written assignments (and some discussion board posts) will be scanned through plagiarism-detecting software. Students who plagiarize any part of their assignments or exams may receive at minimum a zero on that assignment, with more serious repercussions possible (e.g., failure of course, expulsion from UNK). Any materials provided to you in this course are the intellectual property of either myself or the textbook publisher. It is a violation of copyright law to share these materials without permission, either online or in person.

*Appropriate References:*

For the purposes of this course, an appropriate reference is defined as a peer-reviewed journal article or book chapter, assigned reading material, and lecture material. Note that in most cases, lecture material will be derived from a clearly cited peer-reviewed publication or your textbook; in these cases the original source should be cited. Please see additional material available on Canvas for more guidelines.

*University Policies Related to COVID-19:*

The university community is deeply concerned for the well-being of its students, faculty, and staff. Keeping each other as safe as possible will require commitment from each of us; failure to do so will literally place lives in danger. The full policy relating to mitigation of the spread of infectious diseases can be found at <https://www.unk.edu/coronavirus/> Policies that apply to all courses (online, remote, blended, or face-to-face) include:

Students shall monitor their health daily. No student shall attend classes in person while sick. Those who have had contact with positive-tested individuals or show COVID-19 related symptoms must have clearance from the Public Health Center prior to returning to face-to-face classes. There will be no penalties for missing classes for COVID-19 related absences. Students will still be responsible for course content through alternative attendance or other options arranged with the instructor.

Additional policies specific to face-to-face instruction include the following:

1. During Phases I and II, all students are required to wear masks that cover the nose and mouth at all times during class and at any time, inside or outside, where physical distancing of at least 6' is not possible. Instructors shall maintain 16' of distance from students while lecturing but may be closer, if masked. Instructors have the authority to direct students who refuse to wear masks to leave the classroom. Students who have medical issues that make masks inadvisable should contact Disability Services for Students at 308.865.8214 to request an exemption.
2. Students shall not arrive for class more than 5 minutes before the scheduled start time for the course. Instructors shall dismiss students promptly at the end time and all shall leave the classroom promptly. Students who have questions should use office hours rather than before/after class times.
3. Instructors and students should clean their desks prior to class. Cleaning materials will be provided.
4. During Phase III, students will be required to continue to wear masks during class time.

Questions regarding COVID-19 should be directed to the Public Health Center [unkhealth@unk.edu](mailto:unkhealth@unk.edu) or 308-865-8254. Questions regarding the COVID-19 academic policy should be directed to Sr. Vice Chancellor Bicak at [bicakc@unk.edu](mailto:bicakc@unk.edu). Questions regarding department specific requirements should be directed to the

chair of the Biology Department, Dr. Julie Shaffer (shafferjj@unk.edu)

*Students with Disabilities*

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities. To receive accommodation services for a disability, students must be registered with the UNK Disabilities Services for Students (DSS) office, 175 Memorial Student Affairs Building, 308-865-8214 or by email [unkdso@unk.edu](mailto:unkdso@unk.edu)

*UNK Statement of Diversity & Inclusion*

UNK stands in solidarity and unity with our students of color, our LatinX and international students, our LGBTQIA+ students and students from other marginalized groups in opposition to racism and prejudice in any form, wherever it may exist. It is the job of institutions of higher education, indeed their duty, to provide a haven for the safe and meaningful exchange of ideas and to support peaceful disagreement and discussion. In our classes, we strive to maintain a positive learning environment based upon open communication and mutual respect. UNK does not discriminate on the basis of race, color, national origin, age, religion, sex, gender, sexual orientation, disability or political affiliation. Respect for the diversity of our backgrounds and varied life experiences is essential to learning from our similarities as well as our differences. The following link provides resources and other information regarding D&I:

<https://www.unk.edu/about/equity-access-diversity.php>

*Students Who are Pregnant*

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students who are pregnant. To receive accommodation services due to pregnancy, students must contact Cindy Ference in Student Health, 308-865-8219. The following link provides information for students and faculty regarding pregnancy rights. <http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faqs-college-and-graduate-students>

*Reporting Student Sexual Harassment, Sexual Violence or Sexual Assault*

Reporting allegations of rape, domestic violence, dating violence, sexual assault, sexual harassment, and stalking enables the University to promptly provide support to the impacted student(s), and to take appropriate action to prevent a recurrence of such sexual misconduct and protect the campus community. Confidentiality will be respected to the greatest degree possible. Any student who believes she or he may be the victim of sexual misconduct is encouraged to report to one or more of the following resources:

Local Domestic Violence, Sexual Assault Advocacy Agency 308-237-2599

Campus Police (or Security) 308-865-8911

Title IX Coordinator 308-865-8655

Retaliation against the student making the report, whether by students or University employees, will not be tolerated.

If you have questions regarding the information in this email please contact Mary Chinnock Petroski, Chief Compliance Officer ([petroskimj@unk.edu](mailto:petroskimj@unk.edu) or phone 8400).

*Withdraw (W) and Incomplete (I) Grades*

Until the conclusion of the 5th week of the semester, you may withdraw from any class and receive a grade of "W." This grade does not count toward your grade point average and merely indicates that you withdrew from (or "dropped") the class. No instructor can withdraw a student from the roster; that is, if you stop coming to class the instructor cannot withdraw you from the class. The instructor will be forced to assign you a failing ("F") grade for the class.

Under very unusual circumstances, a grade of incomplete ("I") may be issued. An incomplete is not a

substitute for a "W" (withdraw), and it is not a substitute for a poor or failing grade. An incomplete is issued if circumstances beyond the student's control prevent the student from completing the required work for the class by the end of the semester (example: the student is hospitalized during final exam week). If you qualify for an incomplete grade, it is expected that you will receive this grade in all your classes. An incomplete grade will give you an extension to complete outstanding work only; it is not an opportunity to "start over" in the class. All outstanding work must be completed within one year or the "I" grade automatically converts to a failing ("F") grade. An incomplete grade will be considered only during the final six weeks of the semester, after the deadline for receiving a "W" has passed.

**SCHEDULE FOR EVOLUTION OF EPIDEMICS SPRING 2021**

| <b>Week</b> | <b>Lectures</b>   | <b>Assignments</b>                       |
|-------------|---|--|
| 1<br>01/25  | -Syllabus<br>-Introduction to Epidemiology  | Discussion board introductions           |
| 2<br>02/01  | -Introduction to Evolutionary Principles<br>-Evolution of Virulence<br>-Human Evolution | Quiz 1                                   |
| 3<br>02/08  | -Innate Immunity<br>-Adaptive Immunity  | Quiz 2                                   |
| 4<br>02/15  | -Vaccination<br>-Plagues of Antiquity   | Discussion 1<br>Quiz 3                   |
| 5<br>02/22  | -Bubonic Plague   | Discussion 2<br>Quiz 4                   |
| 6<br>03/01  | -AIDS   | Discussion 3<br>Quiz 5                   |
| 7<br>03/08  | -Typhus   | Discussion 4<br>Quiz 6                   |
| 8<br>03/15  | -Malaria  | Discussion 5                             |
| 9<br>03/22  | No Lectures (Complete Midterm)  | Midterm Exam<br>Due 03/27 11:59 p.m. CST |
| 10<br>03/29 | -Cholera  | Discussion 6<br>Quiz 7                   |
| 11<br>04/05 | -Small Pox  | Discussion 7<br>Quiz 8                   |
| 12<br>04/12 | -Antibiotic Resistance<br>-Syphilis   | Discussion 8<br>Quiz 9                   |
| 13<br>04/19 | -Tuberculosis   | Discussion 9<br>Quiz 10                  |
| 14<br>04/26 | -Covid19  | Discussion 10                            |
| 15<br>05/3  | No Lectures   | Final Exam<br>Due 05/3 5 p.m. CST        |