

University of Florida
College of Public Health & Health Professions Syllabus
PHC 6002: Epidemiology of Infectious Disease
Summer: 2015

Delivery Format: Online
Course: <http://lss.at.ufl.edu>

Instructor Name: Jerne Shapiro, MPH
Email Address: shapiroj@ufl.edu
Office Hours: By appointment

Preferred Course Communications: You have email on the course site under the "Inbox" tool. This is the preferred method of communication, and this is how I will contact you if necessary. You can adjust the settings to have all course mail forwarded to your regular email account so that you don't miss anything or forget to check. If you have questions please contact me using this email option. If you are having problems and cannot use the course Inbox option, you may email me directly.

Prerequisites:

PHC 6001 Principles of Epidemiology and PHC 6050 Statistical Methods for Health Science 1 (or its equivalent)

PURPOSE AND OUTCOME

Course Overview

This is an intermediate level course, which will introduce the student to the unique aspects of infectious disease and epidemiological methods used in their study, prevention and control. The student will gain knowledge through lectures, case studies, simulated outbreaks, readings, exercises, and an individual project.

Relation to Program Outcomes

This course reinforces the following competencies:

1. Identify and understand the historical context of epidemiology, epidemiologic terminology, study designs and methodology
2. Identify key sources of epidemiologic data and data collection methodology.
3. Demonstrate ability to analyze and interpret epidemiologic data
4. Explain and communicate current epidemiologic and public health problems for informing scientific, ethical, economic and political discussions of health problems

Course Objectives and/or Goals

1. Understand the historical impact of infectious disease on society.
2. Understand the modes of transmission and pathogenesis of infectious disease and the host, organism and environment relationship as they apply to infectious disease epidemiology.
3. Understand the usual approaches to an outbreak investigation.
4. Understand strategies for diagnosis, prevention and control of infectious agents.
5. Understand the application of epidemiological methods to the study of infectious disease and their importance in prevention of morbidity.
6. Become familiar with selected infectious diseases, with knowledge of the nature, agent and route of contagion of each disease.

Instructional Methods

- 1) Lectures: are for general orientation. Students are responsible for all the material presented in the course and assigned readings.
- 2) Readings and Resources. In addition to the required text, supplementary readings and resources will be posted in the course. The reading list may be supplemented during the course.
- 3) Assessments: A variety of assessments will be used in this course, including but not limited to discussions, assignments and exams.

What is expected of you?

You are expected to actively engage in the course throughout the semester. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

DESCRIPTION OF COURSE CONTENT

Getting Started

To start this course you MUST open the “Modules” tool in the course and complete the Getting Started Module. In order to successfully complete this module, you MUST earn a 100% score on the Syllabus Quiz. The other course modules will NOT open until you have done this. If you do not receive a 100% score, please review the feedback on your quiz attempt and retake as soon as possible. This is an important element to insure that all students are aware of the curriculum requirements for this course. If you have ANY difficulty with this quiz, please send an email in the course to “All Teachers” as soon as possible using the “Inbox” tool.

The first assignment in this course is Discussion Board 1 – found in the “Modules” tool. This is a graded assignment to allow the instructor and students to get to know each other better. Please complete this as soon as possible, but no later than May 17th.

After successful completion of the syllabus quiz, the remaining modules will open. Please click on “Modules” tool and start with “Week 1”. Here you will find the course materials that will take you through to the last week of the course.

Topical Outline/Course Schedule

Module/Week	Elements	Due/Closing Date
Syllabus Quiz – See “Exams” tool in course site - take until you score a 100% before the course material will open - complete as soon as possible, but no later than May 17 th		No later than May 17 th
Week 1 May 11-17	Lectures 1a. Introduction 1b. History of Infectious Diseases 1c. Outbreak Investigations	
	Readings <ul style="list-style-type: none"> • CDC: Steps in an Outbreak Investigation- Lesson 6 Section 2 http://www.cdc.gov/opphss/csels/dsepd/ss1978/lesson6/Section2.html • Specimen Collection- from UNC. • WHO Death Data (page 1-5): Review the info but please don't memorize http://www.who.int/mediacentre/factsheets/fs310/en/index.html • Control of Communicable Disease Manual (CCDM): <input type="checkbox"/> Smallpox <input type="checkbox"/> Plague <input type="checkbox"/> Syphilis 	
	Discussion Boards <ul style="list-style-type: none"> • Discussion Board 1a: Introduction: Please introduce yourself to your fellow classmates. (mandatory discussion board for all students) • Discussion Board 1b: Discussions on History of Infectious Diseases and Outbreak Investigations- has anyone worked on an interesting outbreak? Please share your experience with us. 	No later than May 17 th

Week 2 May 18-24	Lectures	
	2a. Immunology 2b. Vaccine Preventable Diseases	
	Readings	
	The Pink Book: Immunization Strategies for Healthcare Practices and Providers- Epidemiology and Prevention of Vaccine-Preventable Diseases. http://www.cdc.gov/vaccines/pubs/pinkbook/strat.html	
	<ul style="list-style-type: none"> Laboratory Diagnosis and Immunology: An Overview CCDM: <ul style="list-style-type: none"> <input type="checkbox"/> Measles <input type="checkbox"/> Pertussis <input type="checkbox"/> Polio 	
	Discussion Boards	
Week 3 May 25- May 31	<ul style="list-style-type: none"> Discussion Board 2: Discussions on Vaccine Preventable Diseases and Immunology 	
	Exercise 1	
	Solve the Outbreak	
	Centers for Disease Control- Solve the Outbreak Application: http://www.cdc.gov/mobile/applications/sto/web-app.html Select any mission and solve the outbreak! You may choose any outbreaks that interest you. For this assignment you will need to earn minimally <u>3000 points</u> (multiple outbreaks will need to be completed to earn this score). See more information on this assignment the Assignment tool in the course.	May 24th no later than 11:55PM EDST
	Lecture	
	3. Diarrheal Diseases	
Week 4 June 1-7	Readings	
	<ul style="list-style-type: none"> Explore the CDC website on Travelers' Health (this is a great website to use for overseas travel information). Pick a place you would like to visit and explore the health information listed. http://wwwn.cdc.gov/travel/default.aspx Ranking the Risks: The 10 Pathogen Food Combinations with the Greatest Burden on Public Health. (only read the Executive Summary page 7-15) http://www.rwjf.org/content/dam/farm/reports/reports/2011/rwjf70101 CCDM: <ul style="list-style-type: none"> <input type="checkbox"/> <i>Vibrio cholera</i> <input type="checkbox"/> <i>Salmonella</i> <input type="checkbox"/> <i>E. Coli</i> <input type="checkbox"/> <i>Rotavirus</i> <input type="checkbox"/> <i>Giardia lamblia</i> 	
	Discussion Board	
	Discussion Board 3: Discussions on Diarrhea Diseases	
	Lectures	
	4a. Zoonotic Diseases 4b. Vector Borne and Parasitic Diseases	
Week 5 June 8-14	Readings	
	<ul style="list-style-type: none"> MMWR: Locally Acquired Dengue — Key West, Florida, 2009–2010: http://www.cdc.gov/mmwr/pdf/wk/mm5919.pdf The Socio-Ecology of Zoonotic Infections http://onlinelibrary.wiley.com/doi/10.1111/j.1469-0691.2010.03451.x/full CCDM <ul style="list-style-type: none"> <input type="checkbox"/> Dracunculiasis <input type="checkbox"/> Lyme Disease <input type="checkbox"/> Malaria <input type="checkbox"/> Rabies 	
	Discussion Boards	
	Discussion Board 4: Discussions on Zoonotic Diseases and Vector Borne and Parasitic Diseases.	
	Exercise 2	
	Solve the Outbreak	
Centers for Disease Control- Solve the Outbreak Application: http://www.cdc.gov/mobile/applications/sto/web-app.html Select any mission and solve the outbreak! You may choose any outbreaks that interest you. For this assignment you will need to earn minimally <u>6000 points</u> (multiple outbreaks will need to be completed to earn this score). See more information on this assignment the Assignment tool in the course.	June 7th no later than 11:55PM EDST	
Week 5 June 8-14	Lectures	
	5a. Tuberculosis with Michael Lauzardo, MD, MPH 5b. Hospital Infection Prevention and Control with Laura Netardus, RN and Miranda Williams, MPH	
	Readings	
<ul style="list-style-type: none"> National Institute of Health: Detailed Explanation of TB 		

	<p>http://www.niaid.nih.gov/topics/tuberculosis/Understanding/WhatIsTB/Pages/detailed.aspx</p> <ul style="list-style-type: none"> • MMWR: Trends in Tuberculosis --- United States, 2013 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6311a2.htm • Multidrug-resistant tuberculosis (MDR-TB) October 2013 Update- WHO http://www.who.int/tb/challenges/mdr/mdr_tb_factsheet.pdf?ua=1 • CCDM: □□ Tuberculosis 	
	Discussion Boards	
	Discussion Board 5: Discussions on Tuberculosis and Hospital Infection Control	
Week 6 June 15-21	Midterm Exam	
	Exam through ProctorU – Covers Weeks 1 - 5	Available June 18 - 21
	Discussions	
	Discussion Board 6: No topical discussion, see the “Midterm Exam” discussion board for discussions about the exam	
Week 7 June 22-28	Summer Break!	
Week 8 June 29- July 5	Lectures	
	8a. Surveillance	
	Readings	
	Principles of Epidemiology in Public Health Practice. Read Lesson 5: Surveillance only.	
	Discussion Board	
	Discussion Board 8: Discussions on Surveillance	
	Exercise 3	
	Solve the Outbreak Centers for Disease Control- Solve the Outbreak Application: http://www.cdc.gov/mobile/applications/sto/web-app.html Select any mission and solve the outbreak! You may choose any outbreaks that interest you. For this assignment you will need to earn minimally 9000 points (multiple outbreaks will need to be completed to earn this score). See more information on this assignment the Assignment tool in the course	July 5th no later than 11:55PM EDST
Week 9 July 6-12	Lectures	
	9a. Influenza	
	Readings	
	<ul style="list-style-type: none"> • Manual for Surveillance of Vaccine Preventable Disease: http://www.cdc.gov/vaccines/pubs/surv-manual/chpt06-influenza.html • Pandemic Influenza Storybook. Take a minute and read a few of the stories submitted. http://www.pandemicflu.gov/storybook/stories/index.html • CCDM: □□ Influenza 	
	Discussion Board	
Discussion Board 9: Discussions on Influenza		
Week 10 July 13-19	Lectures	
	Emerging Infectious Diseases with Glenn Morris, MD, MPH, TM	
	Readings	
	Population biology of emerging and re-emerging pathogens. Trends in Microbiology Vol. 10 No. 10 (Suppl.), 2002 http://courses.washington.edu/envh311/Readings/Optional_08.pdf	
	Discussion Board	
	Discussion Board 10: Discussions on Emerging Infectious Diseases	
	Exercise 4	
	A Multistate Outbreak of <i>E. coli</i> O157:H7 Infection See more information on this assignment under the Assignment tool.	July 19th no later than 11:55PM EDST
Week 11 July 20-26	Lectures	
	11a. Sexually Transmitted Infections (STIs) and HIV/AIDS	
	Readings	
	<ul style="list-style-type: none"> • How it Began by Frontline: http://www.pbs.org/wgbh/pages/frontline/aids/virus/origins.html. If you have the time and are interested, the video series on HIV by Frontline is very interesting. 	

	<p>Located to the left on side of the webpage.</p> <ul style="list-style-type: none"> Human Papillomavirus Vaccination Coverage Among Adolescent Girls, 2007–2012, and Postlicensure Vaccine Safety Monitoring, 2006–2013 — United States, MMWR. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6229a4.htm Oncology Dietitian Exposes Fraud in CDC's HPV Vaccine Effectiveness Study. This internet link shows an opposing view on the HPV vaccine. I am including this article so you can have an understanding of what parents can find on the first page of a Google search for "HPV effectiveness". http://articles.mercola.com/sites/articles/archive/2013/07/16/hpv-vaccine-effectiveness.aspx 	
	Discussion Board	
	Discussion Board 11: Discussions on STIs and HIV/AIDS	
	Final Project Due	
	Submit your final project paper as a Word attachment via the Assignment tool. Your paper will be checked for originality through Turnitin. Check your originality score, edit as necessary. See the Assignment "Final Project" in the course site.	July 26th no later than 11:55PM EDST
Week 12 July 27- August 2	Lectures	
	12a. Molecular Epidemiology	
	Readings	
	Molecular Epidemiology of an Outbreak of Febrile Gastroenteritis Caused by <i>Listeria monocytogenes</i> in Cold-Smoked Rainbow Trout. Journal of Clinical Microbiology. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC85164/	
	Discussion Board	
	Discussion Board 12: Molecular Epidemiology: Conversations on molecular epidemiology and its uses	
Week 13 July 31 -7	Final Exam	
	Exam through ProctorU – Covers all class material. Weeks 1 - 13	Available August 1-4
	Discussion Board	
	Final Exam discussion board	

Course Materials and Technology

1. Lectures – provide a general overview of each topic.

2. Required Text, readings, and materials

- A. Heymann, David, MD. Control of Communicable Diseases Manual, 19th Edition. Washington DC: American Public Health Association, 2008. It is also available with a mobile and web application. Refer to <http://www.apha.org/publications/bookstore/ccdmmobile.htm> for more information about on the web application.
- B. Supplemental readings will also be assigned for lectures and are posted by topic under the course schedule.
- C. Required material: Students enrolled in this course must have a working webcam and microphone for taking exams (see exams section of syllabus).

3. Additional resources (You should sign up for the following by (Sunday May 17th)

- A. Infectious Disease list serve. Pro-med: www.promedmail.com Click on the subscribe link. (HINT: sign up only for the "Pro Med Digest A consolation of Posts" only)
- B. Morbidity and Mortality Weekly Report: <http://www.cdc.gov/mmwr/mmwrsubscribe.html>
- C. (Optional) Emerging Infectious Diseases. To subscribe to the Emerging Infectious Diseases e-mail list, go to <http://wwwnc.cdc.gov/eid/> click on the subscribe button. Choose the electronic version of the publication. You will also be asked if you would like to receive other information from the CDC, choose what feels appropriate to your interests.
- D. (Optional) Desowitz, Robert. New Guinea Tapeworms and Jewish Grandmothers: Tales of Parasites and People. New York: W.W. Norton & Co., 1987.
- E. (Optional) Contagion. Directed by Steven Soderberg. Warner Brothers, 2011.

4. Examinations: Students are expected to take the examinations on the scheduled date and time. There will be a two-hour midterm and a two-hour final exam. Exams will be administered in Canvas with a proctoring service (See below).

This course will be utilizing the services of ProctorU as proctoring service for the exams in this course. This service is a user-friendly system, but you must follow these guidelines to register and take your exams:

- Students must register for a time slot for their course exams with ProctorU starting the second week of the semester, but no later than 3 days prior to an exam. You will register for your exams at www.proctoru.com. Their website will describe how you register and log on for your exam. Your exams will be taken in your Sakai course, but only ProctorU will be able to open the exam for you.
- Exams will be available via ProctorU 8:00AM – midnight (Eastern time) from Monday through Sunday during the exam period only on the days the exams are scheduled in this course.
- Students will need to have a microphone and webcam in place during the test-taking period. An inexpensive webcam and mic will work fine. Students will NOT be allowed to take an exam without a webcam. (Note: a microphone and webcam are program requirements for our online programs, see computer requirements on our program website)
- Students will be asked to show 1 or 2 forms of ID with a picture and ask some questions as part of their public record for identification purposes.
- Exams may be taken at a student's home, but students must plan to take their exams in an environment where other people are not in the room with the student during the exam. No phones, no other computers/tablets, no TV. See the "Taking Exams" document posted in the tool column in your course site for more information on taking exams in this course.

5. Discussion Boards: There is one mandatory discussion board due the first week of class; this is for you to introduce yourself to the class. The rest of the discussion boards are designed for discussion on specific topics. Each lecture will have a dedicated discussion board to discuss the material and assignments for that lecture. These are optional discussion boards; it is your choice to post to these. If you do choose to post it must be something that is appropriate to the topic. There is also a general discussion board section, an exercise and project discussion board section, timely topic discussion boards, and boards to discuss the exams. These discussion boards are not for grades but to assist you in the course.

6. Class exercises: There will be a total of four class exercises due.

Each exercise is worth 5% of your course grade (total 20%). See more information, and due dates, on these assignments via the Assignment tool in the left hand menu of the course site.

7. Final Project- Please read the detailed description for the project posted on the course website in the "Assignments" tool on the left hand menu. This is an individual assignment and your final project is due 7/26. Only submit your final paper to be graded.

For technical support for this class, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2

- <https://lss.at.ufl.edu/help.shtml>

ACADEMIC REQUIREMENTS AND GRADING

Grading

Requirement	Due date	Points or % of final grade (% must sum to 100%)
Class Discussion	May 17	5%
Midterm Exam	June 18-21	25%
Exercises	See schedule for deadlines	20%
Final Project	July 26	25%
Final Exam	Aug 1-4	25%

Point system used (i.e., how do course points translate into letter grades).

Points earned	93 - 100	90 - 92	87 - 89	83 - 86	80 - 82	77 - 79	73 - 76	70 - 72	67 - 69	63 - 66	60 - 62	Below 60
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

Please be aware that a C- is not an acceptable grade for graduate students. In addition, a grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A.

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:

<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Policy Related to Make up Exams or Other Work:

Requirements: Students are responsible for all course material, including reading all required materials prior to each lecture. The course is conducted in eLearning and all assignments, course lectures, discussions, emails and exams will be delivered in this medium. Students are **required** to print a copy of the syllabus from the syllabus tool in the course. You must take a syllabus quiz and score a 100%. See the "Getting Started" section above. Students should also read your e-mail and announcements in the course several times a week. Please note that announcements and emails sent out from the course site will go to your UFL email address (versus your Google, Yahoo, etc.), please check this mail at <http://webmail.ufl.edu> regularly also. Students should also reference the calendar in the course to keep up with weekly deadlines.

Make Ups: If you are unable to meet a deadline in this course for a reason approved above and have given prior notification to the instructor when possible, you will be given adequate time to make up any coursework missed. All other missed or late work will receive a grade of zero. Make-up exams will be provided only in

cases of excused absences or conflict during final exams per University policy and **MUST** be discussed with the instructor in advance. Make-up exams will differ from the regularly scheduled exam.

Readings and Discussions: Students should read the assigned readings prior to viewing course lectures and be prepared to discuss the material on course discussion boards.

Please note: Any requests for make-ups due to technical issues **MUST** be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You **MUST** e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance

Attendance Policy: Per the University of Florida, students are responsible for satisfying all academic objectives as defined by the instructor. Acceptable reasons for absence include illness, serious family emergencies, special curricular requirements (e.g., judging trips, field trips, professional conferences), military obligation, severe weather conditions, religious holidays and participation in official University activities such as music performances, athletic competition or debate. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused. Remember that, when possible (i.e. extracurricular activities, official University activities, and religious holidays), **prior notification** of absence is required if the student plans to be given an extension on assignments. Even though this is an online course, students are expected to log on regularly and participate in the course.

All faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

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

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

Communication Guidelines

Preferred Course Communications: You have email on the course site under the "Inbox" tool. This is the preferred method of communication, and this is how I will contact you if necessary. You can adjust the settings to have all course mail forwarded to your regular email account so that you don't miss anything or forget to check. If you have questions please contact me using this email option. If you are having problems and cannot use the course Inbox option, you may email me directly.

Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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."

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>
<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Online Faculty Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:
 Alachua County Crisis Center
 (352) 264-6789
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.