

**Syllabus PHC 6001: Principles of Epidemiology in Public Health
(3 credit hours)**

Semester: Spring 2023

Delivery Format: asynchronous via E-Learning: <http://lss.at.ufl.edu> Course

Website: E-Learning in Canvas

Instructor: Jerne Shapiro, MPH

Physical Office: Emerging Pathogens Institute, Suite 256

Office Hours: Mondays, 12:00 pm-1:00 pm; other times by appt.

Phone: 352-273-9793

Email: shapiroj@ufl.edu

Teaching Assistant: see the class website

Email Address: see the class website

Preferred course communications:

Preferred Course Communications (e.g., email, office phone): Direct email (shapiroj@ufl.edu) through Outlook email. This is the preferred method of communication, not the message function within Canvas. Emails received on weekdays (Monday-Thursday) can expect a response within 24 to 48 hours. If I have not responded within two days, don't hesitate to contact me again. Your message is important to me, but it may have been overlooked. Emails received during the weekend or after 5pm on Friday will be answered on the following Monday.

Prerequisites

Graduate status or approval of instructor

PURPOSE AND OUTCOME

Course Overview

This course is an introduction to epidemiology for students majoring in the health sciences. This course introduces the principles, concepts, and methods of the epidemiologic investigation of health-related events and processes. The purpose of this course is to equip students with a core epidemiologic toolset to explain the place of epidemiology in general health thinking and to communicate and apply the basic principles of epidemiology. Examples of the use of the principles of epidemiology will be presented so that students will have sufficient understanding to apply such principles in future health work. It is hoped that the course will allow the students to read critically and evaluate their own health-related work using epidemiologic principles. This course is not intended to present the epidemiologic aspects of any specific disease or class of diseases.

CEPH Foundational Knowledge Covered in this Course

The Council on Education for Public Health (CEPH) is the accrediting body for the College of Public Health and Health Professions. CEPH has outlined the Foundational Public Health Knowledge that all graduates of the college must be grounded in. As a core course for public health graduate programs in the college, this course covers the following CEPH Foundational Knowledge Content:

- **Explain public health history, philosophy, and values**
- **Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health**
- **List major causes and trends of morbidity and mortality in the U.S. or other communities relevant to the school or program**
- **Discuss the science of primary, secondary, and tertiary prevention in population health, including health promotion, screening, etc.**
- **Explain the critical importance of evidence in advancing public health knowledge**
- **Explain the effects of environmental factors on a population's health**
- **Explain biological and genetic factors that affect a population's health**
- **Explain behavioral and psychological factors that affect a population's health**
- **Explain how globalization affects the global burdens of disease**

Course Objectives and/or Goals

- **Apply epidemiological methods to settings and situations in public health practice**
- Calculate basic epidemiology measures of frequency and association
- **Select quantitative and qualitative data collection methods appropriate for a given public health context**
- **Interpret results of data analysis for public health research, policy, or practice**
- Evaluate the strengths and limitations of epidemiologic reports
- Identify common sources of error in epidemiologic research
- Explain the importance of epidemiology for informing scientific, ethical, economic, and political discussion of health issues
- Identify basic ethical and legal principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data
- **Communicate audience-appropriate public health content, both in writing and through oral presentation**

Instructional Methods

1. Readings. Reading from the textbook are assigned for each module. If you wish to work ahead, the textbook readings for the entire semester are included in the course schedule. Additional reading will include supplemental materials posted to Canvas. Students are responsible for the material included in the readings.
2. Lectures (including audio and slides). The lecture material is intended to complement the concepts presented in the course readings. Students are responsible for the material presented during course lectures. Please note that viewing the slides without listening to the lectures is not sufficient to succeed in this course.
3. Discussions. Discussions are utilized to reinforce readings and lectures, providing students with the opportunity to explore and apply concepts in a real-world context. There will be weeks during the semester during which you will be required to engage in discussions. The expectation is that you participate throughout the week; you may not wait until the day before or the due date to initiate group work. This provides your peers ample opportunity to respond on time.
4. Assessment. A variety of methods will be used to assess understanding of the material, including post-module quizzes and exercises associated with most modules, and examinations.

What is expected of you?

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

DESCRIPTION OF COURSE CONTENT

Course Materials and Technology

Required Text: Essentials of Epidemiology in Public Health, 4th Edition by Ann Aschengrau, ScD, and George Seage III, DSc. Copyright 2020, ISBN: 978-1284128352.

Completion of assigned readings from the text is *mandatory*. Lectures will reinforce important aspects of these reading materials. However, students are still responsible for any content from the assigned readings and exercises that are NOT covered in the lecture presentations. On the rare occasion when there are discrepancies between the lecture and the textbook, you should rely on the information presented during the lectures.

Online asynchronous learning

The course website is located in Canvas. Our classes will employ asynchronous instruction to help students maximize their learning. Instructional activities include online video lectures, online quizzes, web assignments, and group discussions and forums. Instead, content that would have traditionally been presented during a live class lecture is provided online. The assignments and quizzes will allow the students to think critically, obtain expertise, and practice critical reasoning.

What Does It Mean for Students?

Students are expected to be prepared by completing all readings and video lectures. The coursework typically lays a foundation of knowledge or gives students the practice needed to engage in higher levels of learning during assignments, quizzes, and tests. Students practice critical skills health professionals use – critical thinking, problem-solving, collaborating, and/or problem-solving concepts gained from the assignments to real-world examples. **If students are not prepared, they will likely struggle to reach the higher learning goals of the course.** When students are prepared, they can be active participants throughout the learning experience, which will help them master course material and maintain what they have learned beyond the end of the course.

Computer resources needed

Students must have a working webcam and microphone to participate in this course. Consult the course website in the Getting Started section for other computing needs and specifications.

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

Course Schedule: The course is organized into 12 modules, and one module will be covered each week. Weeks for this course are defined as Tuesday through Monday. Assignments, post-module quizzes, and participatory learning forums are due on Monday at 11:59 PM EST, and post-module quizzes will be available Friday–Monday at the end of examination weeks, due Monday at 11:59 PM EST. The course is designed to allow students to

complete coursework and examinations on weekdays or weekends. The course site will publish the week's modules each Tuesday. The announcement and conference features will also be utilized. The content of this syllabus, particularly regarding content activities, may be adjusted based on the student's academic progression.

Assignments

12 Module Quizzes – 15% of the course grade (equal weighting for each quiz)

You will complete 12 module quizzes during the semester. Individual quizzes will be conducted using Canvas; ten quizzes will count toward your grade. (These quizzes are intended to help reinforce the lecture material in each module and help you judge your understanding of the course content before applying that content. You will have a maximum of two attempts to complete the quiz, and your final grade will be the highest of attempts completed. They will be open-book, open-note quizzes.

2 Proctored Exams – 40% of the course grade (equal weighting for each exam)

Two Exams worth 20% each. Exams are not cumulative (Midterm Exam – Modules 1 to 5; Final Exam: Modules 6 to 12). Honor lock will be used. The exam in Canvas may include any course content covered in the video lectures, assigned readings, quizzes, and assignments. The format for these exams varies, including multiple choice questions, matching, and short answer questions. You will have 90 minutes to complete each exam. You will need a non-programmable calculator to complete the exam. Make-up exams will not be given except in extreme circumstances. An essay will test your knowledge and understanding of the assigned subjects.

10 Assignments – 30% of the course grade (equal weighting for each assignment)

There are 10 assignments that will be completed as homework; your highest 8 grades will count toward your grade, and the lowest two grades will be dropped. Assignments are weighted equally to each other.

Epi in the news – 15% of the course grade

You will create a discussion board posting that describes a current topic in epidemiology (for example, COVID-19 or Monkeypox) that has been in the news recently. This might be a recent outbreak, an important study or clinical trial result, or a policy or legal issue related to epidemiology studies. You will only have to create a primary post once during the semester, but everyone will need to write a substantive response to their groupmates' postings within one week of their posting on the discussion board. A schedule for posting and responding will be available in the Canvas course site during the second week of classes.

A substantive response goes beyond the acknowledgment of the original posting and deepens the conversation. Here are my expectations of what constitutes a substantive response

<https://www.mssu.edu/academics/distance-learning/pdfs/Effectively%20Responding%20to%20a%20Peer.pdf>

Module Extra Practice Quizzes – 0% of the course grade

Open-book, open-note Extra Practice Quizzes will be available to help you study. They are to help you learn and prepare for the Exams, and there are no points attached to them.

POLICY RELATED TO MAKE-UP EXAMINATIONS OR OTHER WORK

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.

Policy Related to Technical Issues

Any requests for make-ups due to technical issues **must** be accompanied by the ticket number received from the UF Computing Help Desk created 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.

To earn any credit, assignments must be submitted on time. Late submissions will not be accepted, unless emergent and other unforeseen circumstances occur based on UF policies. Students are advised to access exercise instructions early each week and plan accordingly to ensure timely submission of exercises. It is recommended that students submit assignments on time before the last day to account for unforeseen circumstances that may arise. Note that assignments close in Canvas at the stated date and time, and no work can be submitted via e-mail after the deadline for any reason.

Week	Module	Online Lecture Topic	Readings	Assignment (deadline – every Monday at 23:59 EST)
01/09/23		Orientation	Syllabus	<ol style="list-style-type: none"> 1. Read the course syllabus and complete the syllabus quiz 2. Please introduce yourself to your instructors and peers on our course website
01/17/23	1	The approach and evolution of Epidemiology	<ol style="list-style-type: none"> 1. Text, Chp 1 2. Assessing the Contributions of John Snow to Epidemiology 	<ol style="list-style-type: none"> 1. Module 1 quiz 2. Module 1 Assignment 3. Practice quiz
01/24/23	2	Measures of Frequency	Text, Chp 2	<ol style="list-style-type: none"> 1. Module 2 quiz 2. Module 2 Assignment 3. Practice quiz
01/31/23	3	Comparing Frequencies	<ol style="list-style-type: none"> 1. Text, Chp 3 2. Healthy People 2000 Statistical Notes - Direct Standardization 	<ol style="list-style-type: none"> 1. Module 3 quiz 2. Module 3 Assignment 3. Practice quiz
02/07/23	4	Sources of Data, Disease Transmission, Descriptive Epi	Text, Chp 4 Text, Chp 5	<ol style="list-style-type: none"> 1. Module 4 quiz 2. Module 4 Assignment
02/14/23	5	Screening in PH Practice	Text, Chp 16	<ol style="list-style-type: none"> 1. Module 5 quiz 2. Module 5 Assignment 3. Practice quiz
02/21/23	Midterm: Modules 1-5. Open from 2/24-2/25			
02/28/23	6	Overview of Epi Study Designs, Experimental Studies	Text, Chp 6	<ol style="list-style-type: none"> 1. Module 6 quiz 2. Module 6 Assignment 3. Practice quiz
03/07/23	7	Cohort Studies	Text, Chp 8	<ol style="list-style-type: none"> 1. Module 7 quiz 2. Module 7 Assignment 3. Practice quiz

03/13/23	Spring Break – No Class			
03/21/23	8	Case Control Studies	Text, Chp 9	1. Module 8 quiz 2. Practice quiz
03/28/23	9	Bias & Confounding	Text, Chp 10 Text, Chp 11	1. Module 9 quiz 2. Module 9 Assignment 3. Practice Quiz
04/04/23	10	Causation	Text, Chp 15	1. Module 10 quiz 2. Module 10 Assignment 3. Practice Quiz
04/11/23	11	Critical Reading of Epi Papers	Text, Chp 14	1. Module 11 quiz 2. Module 11 Assignment
04/18/23	12	Ethics and regulation for studies involving human subjects Modules review		1. Module 12
04/25/23		No new material. Time provided to review for the Final Exam		
04/30/23 to 5/1/23	Final Exam: Modules 6-12 Open from 4/30-5/1			

GRADING

The course requirements are presented in percentages above and add up to 100% of the course grade.

Module Quizzes	Weekly	15%
Assignments	Weekly	30%
Midterm Exam	02/24/23 to 02/25/23	20%
Final exam	05/30/23 from 06/01/23	20%
Epi in the News	Weekly	15%
		Total 100%

Final grades follow the scale in this table:

Percent of Course	Letter Grade	Grade Point
93% - 100%	A	4.00
90% - 92.9%	A-	3.67
87% - 89.9%	B+	3.33
83% - 86.9%	B	3.00
80% - 82.9%	B-	2.67
77% - 79.9%	C+	2.33
73% - 76.9%	C	2.00
70% - 72.9%	C-	1.67
67% - 69.9%	D+	1.33
63% - 66.9%	D	1.00
60% - 62.9%	D-	0.67
Below 60%	E	0.00

Be aware that a C- is not an acceptable grade for graduate students. 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>

ATTENDANCE

Per the UF Graduate Catalog, "Students are responsible for meeting all academic objectives as defined by the instructor. In general, acceptable reasons for absences include illness, serious family emergencies, special curricular requirements, military obligation, severe weather conditions, religious holidays, and participation in official University activities. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused. Other reasons also may be approved."

Policy Related to Required Class Attendance Please note all faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy, see the Registrar's website for additional details:

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

STUDENT ROLES AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

A professional and respectful demeanor is expected of all students.

PHPH Inclusive Learning Environment

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu.

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.

Turnitin

Academic integrity is a serious issue that has been a growing problem at Universities. I have a zero tolerance policy for breaches of academic integrity, including plagiarism and cheating. There are multiple video resources posted on our Canvas site that discuss plagiarism and how to properly quote and cite other people's work. With each assignment and exam you complete you are pledging that you hold yourself and your classmates to the highest standards of academic integrity.

I use an online tool called Turnitin to check student work for originality; in other words, your work should be in your own words and not copied from any source. Every student needs to watch the videos on plagiarism and on using Turnitin and needs to check their own Turnitin report, made available through the Canvas site automatically when you submit anything through assignments. You should submit assignments early enough to have time before the due date to make revisions to them if your Turnitin report shows areas of high similarity to online resources. **Any student caught cheating or plagiarizing will be reported to the Dean of Students Office and will be subject to academic penalties in the course, at minimum.**

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/>.

Recording Within the Course:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Policy Related to Guests Attending Class:

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are

responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy: <http://facstaff.php.ufl.edu/services/resourceguide/getstarted.htm>

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.

Incomplete Grades

Per the University Catalog, "An incomplete grade may be assigned at the discretion of the instructor as an interim grade for a course in which you have completed a major portion of the course with a passing grade, been unable to complete course requirements before the end of the term because of extenuating circumstances, and obtained agreement from the instructor and arranged for resolution of the incomplete grade. Instructors are not required to assign incomplete grades. If make-up work requires classroom or laboratory attendance in a subsequent term, you must not register for the course again. Instead, you should

audit the course and pay course fees.

If the make-up work does not require classroom or laboratory attendance, you and your instructor should decide on an appropriate plan and deadline for completing the course. When the course is completed, the instructor will initiate the change of grade. These procedures cannot be used to repeat a course for a different grade. An I grade should not be assigned to a student who never attended class; instead, instructors should assign a failing grade.”

“A grade of I* or N* is not considered a failing grade for the term in which it is received, and it is not computed in the grade point average. However, if the I* or N* has not been changed by the end of the next term for which you are enrolled and receive grades, it will be counted as a failing grade and used in computation of your grade point average.”