

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

Semester: Fall 2024

Delivery: Blended

Course Website: E-Learning in Canvas

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**Instructor**

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**Preferred course communications:**

**E-mail is the preferred mode of communication.** [Use the e-mail function in Canvas](#), selecting Dr. Séraphin and the assigned teaching assistant as the recipient(s). Include **PHC 6001** in the subject line. Please give me up to 24 hours during the work week to respond to your email, although I usually reply much sooner. If you do not receive a response in these stated time frames, re-send the message (with the daily volume of e-mail, messages occasionally get missed). See Communication Guidelines for more information.

Please address me as Dr. Séraphin or Professor Séraphin and let me know how you prefer to be addressed. Email correspondence should follow the etiquette of business emails.

**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 student to critically read and evaluate his or her 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 & 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

### Blended Learning

*What is blended learning and why is it important?*

A Blended Learning class uses a mixture of technology and face-to-face instruction to help you maximize your learning. Knowledge content that, as the instructor, I would have traditionally presented during a live class lecture is instead provided online before the live class takes place. This lets me focus my face-to-face teaching on course activities designed to help you strengthen higher order thinking skills such as critical thinking, problem solving, and collaboration. Competency in these skills is critical for today's health professional.

*What is expected of you?*

You are expected to actively engage in the course throughout the semester. You must come to class prepared by completing all out-of-class assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live class sessions. If you are not prepared for the face-to-face sessions, you may struggle to keep pace with the activities occurring in the live sessions, and it is unlikely that you will reach the higher learning goals of the course. Similarly, you are expected to actively participate in the live class. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

### Online synchronous and asynchronous learning

The course website is located in Canvas. Our classes will employ a mixture of asynchronous and synchronous instruction to help students maximize their learning. Instructional activities include online video lectures, online quizzes, web assignments, and group discussions and forums. Content that would have traditionally been presented during a live class lecture is instead provided online before the synchronous class takes place. This allows more time

to focus on the higher levels of learning. The synchronous session and group work will allow the students to think critically, obtain expertise, and practice critical reasoning.

### **What Does It Mean for Students?**

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

### **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 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.

***Computer resources needed.*** Students must have a working computer or tablet 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](mailto: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 and post-module quizzes are due on Monday at 11:59 PM EST. The course is designed this way to afford students the flexibility to complete coursework and examinations on weekdays or weekends. On the course site, the week's modules will be published each Tuesday).

### **Assignments**

#### **12 Post-Module Quizzes – 5% of the course grade (equal weighting for each quiz)**

You will complete 12 post-module quizzes during the semester. Individual quizzes will be conducted using Canvas, ten of your quizzes will count towards 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 prior to applying that content in class. You will have a maximum of two attempts to complete the quiz and your final grade will be the highest grade of all attempts completed.

#### **2 Proctored Tests – 40% of the course grade**

**Tests are not cumulative (Midterm Test – Modules 1 to 5; Final Test: Modules 6 to 11).** The test will be administered in person via Canvas and may include any course content covered in the video lectures, assigned readings, individual and group quizzes, assignments, and participatory learning forums. The format for these tests

varies, including multiple choice questions, matching questions, 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.

**12 Assignments – 15% of the course grade (equal weighting for each assignment)**

There are 12 assignments that will be completed as homework; your highest 10 grades will count toward your grade and the lowest two grades will be dropped. Assignments are weighted equally to each other.

**10 Group Quizzes – 10% of the course grade (equal weighting for each assessment)**

Ten group open-book, open-note, group quizzes will be completed at every synchronous session. Each quiz is worth 10 points. Grades will be given to only those students participating in the session. Group quizzes are equally weighted to each other.

**Epi in the News 10% of course grade**

Your group will prepare a 8- 10 minute presentation on a current topic in epidemiology that has been in the news recently, and that relates to the material we covered in class within the past two weeks. This might be an update on COVID, an important study or clinical trial result, or a policy or legal issue related to epidemiology studies. All members of your group should present. Detailed guidelines for this activity are described in Canvas.

**POLICY RELATED TO MAKE-UP EXAMINATIONS OR OTHER WORK**

If you have a scheduling conflict with the date of any of the course examinations, please discuss it with Dr. Séraphin as soon as you are aware of the conflict. For rare and acceptable situations, arrangements may be made for an alternative time at which to take the examination. These arrangements need to be made as soon as possible in the semester but no later than two weeks prior to the scheduled examination date. Late examinations will only be permitted at the discretion of the instructor (advanced notice in writing required and per applicable University of Florida policies). For unforeseen and exceedingly-rare circumstances, taking a make-up examination after the official closing time may be permitted. Note that any requests for make-up examinations due to technical issues MUST be accompanied by the ticket number when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail Dr. Séraphin and Ms. Hardemon (hardemont@ufl.edu) within 24 hours of the technical difficulty if you wish to request a make-up.

**To earn full credit, assignments must be submitted on time. Late submissions will be penalized 10% per day 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 the timely submission of exercises. It is recommended that students not wait until the last day to submit exercises to account for unforeseen circumstances that may arise.**

Week	Module	Online Lecture Topic	In-class activities	Readings	Assignment (deadline – every Monday at 23:59 EST) PFL due at the end of class
8/27			Orientation		
9/3	1	The approach and evolution of Epidemiology	Epi Curve activity Epidemiology Module 1 group quiz	Syllabus Text, Chp 1 Text, Chp 5, pgs 99 - 116	1. Post-module 1 quiz 2. Module 1 Individual Assignment
9/10	2	Measures of Frequency	Disease Frequency Module 2 group quiz Epi in the News	Text, Chp 2	1. Post-module 2 quiz 2. Module 2 Assignment
9/17	3	Comparing Frequencies	Measures of association Module 3 group quiz Epi in the News	Text, Chp 3	1. Post-module 3 quiz 2. Module 3 Assignment
9/24	4	Sources of Data, Disease Transmission, Descriptive Epi	Descriptive Epidemiology Module 4 group quiz Epi in the News	Text, Chp 4 Text, Chp 5, pgs 116 - 151	1. Post-module 4 quiz 2. Module 4 Assignment
10/1	5	Screening	Screening Module 5 group quiz Module 1-5 review	Text, Chp 16	1. Post-module 5 quiz 2. Module 5 Assignment
10/8		<b>Test 1</b>	<b>Modules 1 to 5</b>		
10/15	6	Overview of Epi Study Designs, Experimental Studies	Experimental studies Module 6 group quiz Midterm review	Text, Chp 6 Text, Chp 7	1. Post-module 6 quiz 2. Module 6 Assignment
10/22	7	Cohort Studies	Cohort studies- Module 7 group quiz Epi in the News	Text, Chp 8	1. Post-module 7 quiz 2. Module 7 Assignment
10/29	8	Case Control Studies	Case-control studies Module 8 group quiz Epi in the News	Text, Chp 9	1. Post-module 8 quiz 2. Module 8 Assignment
11/5	9	Bias & Confounding	Bias and confounding - Module 9 group quiz Epi in the News	Text, Chp 10 Text, Chp 11	1. Post-module 9 quiz 2. Module 9 Assignment
11/12	10	Causation & Effect modification	Effect modification Module 10 group quiz Epi in the News	Text, Chp 12 Text, Chp 13 Text Chp .15	1. Post-module 10 quiz 2. Module 10 Assignment
11/19	11	Critical Reading of Epi Papers	Review of scientific literature assignment – Editor	Text, Chp 14	1. Post-module 11 quiz 2. Module 11 Assignment
12/3	12	Ethics	Ethics Epi in the News Review 6 – 12 modules review		1. Post-module 12 2. Module 12 Assignment
12/10		<b>Test 2</b>			<b>Modules 6 to 11</b>

## GRADING

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

Post-Module Quizzes	Weekly	15%
Attendance	Weekly	5%
Group Quizzes	Weekly	10%
Home Assignments	Weekly	20%
Epi in the News		10%
Midterm Exam		20%
Final exam		20%

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

There are 15 required lab classes during the semester (including two exams during lab sessions) and **attendance at all of those sessions is mandatory**. It is your responsibility to sign in during class so that your attendance is recorded.

Per the UF Graduate Catalog, "Students are responsible for meeting all academic objectives as defined by the instructor. Absences count from the first class meeting. In general, acceptable reasons for absences from class 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."

If you are aware that you will need to miss a class session for an approved reason, inform the instructor in advance to receive an exception. Excused absences must be consistent with university policies in the Graduate Catalog

(<https://catalog.ufl.edu/graduate/regulations/#text>). Additional information can be found here:

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

## STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

### Expectations Regarding Course Behavior

A professional and respectful demeanor is expected of all students. Students are expected to start the session on time and stay for the duration of the class period.

### PHHP 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](http://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.**

### **Mid-course Evaluation**

Students in this course will be provided with the opportunity to provide feedback on the course mechanics and their learning experience. A survey will be made available on the course website in Canvas to solicit such feedback. This evaluation will occur as a way to identify ways in which the course may be improved for this cohort during the semester.

### **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/>.

## **CLASSROOM POLICY**

### **Professionalism**

As students pursuing a path in the health professions or public health, it is crucial to demonstrate professional behaviors that reflect integrity and commitment to the health of patients, fellow health professionals, and to populations we serve. To accomplish this, a strong responsibility for the well-being of others must be evident in our decisions, along with accountability for our actions. Professionalism in the health disciplines requires adherence to high standards of conduct that begin long before graduation.

## **SUPPORT SERVICES**

### **Accommodations for Students with Disabilities**

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. 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.



- **U 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>
- **University Police Department:** [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website.](#)

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.

### **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](http://www.multicultural.ufl.edu)