

University of Florida
College of Public Health & Health Professions

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

Syllabus

Fall 2019

Delivery Format: E-Learning in Canvas

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Office Hours: Tuesdays @ 8:00 PM EDT/EST in zoom conferences or by appointment.

Teaching Assistant: Alyssa L. Berger, MPH
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Office hours by appointment.

Course Communication: E-mail is the preferred mode of communication. Use the e-mail function in Canvas, selecting Dr. Gurka and Ms. Berger as recipients. *Include "PHC 6001:" in the subject line.* Messages sent on business days prior to 4:00 PM will *generally* receive a response by 11:59 PM EDT/EST. Otherwise, messages will *generally* receive responses by 11:59 PM EDT/EST the next business day. If you do not receive a response in these stated time frames, re-send the message. See *Communication Guidelines* for more information.

PREREQUISITES

None.

PURPOSE AND OUTCOME

Course Overview

This course is an introduction to epidemiology for students majoring in the health sciences. This course presents the principles and methods of the epidemiologic investigation of health-related events, states, and processes. The purpose of this course is to equip students with the necessary knowledge and skills to explain the place of epidemiology in the 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. The course is intended to empower the student to critically read and evaluate his or her public health work using epidemiologic principles. This course is not intended to present the epidemiologic aspects of any specific disease or class of diseases.

Course Objectives

Upon successful completion of this course, students should be able to:

1. Apply the basic terminology and definitions of epidemiology,
2. Calculate basic epidemiologic measures of frequency and comparisons of frequency between populations,
3. Identify key sources of data for epidemiologic purposes,
4. Draw appropriate inferences from epidemiologic data,
5. Evaluate the strengths and limitations of epidemiologic reports,
6. Apply basic methods and data,
7. Identify the principles and limitations of public health screening programs,
8. Describe a public health problem in terms of magnitude, person, time, and place,
9. Explain the importance of epidemiology for informing scientific, ethical, economic, and political discussion of health issues,
10. Identify basic ethical and legal principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data, and
11. Communicate epidemiologic information to lay and professional audiences.

Instructional Methods

1. Readings. Reading from the textbook is assigned for each module. Additional reading will include supplemental materials posted to Canvas. Students are responsible for material in assigned readings.
2. Lectures (including audio and slides). Lecture material is intended to reinforce concepts presented in the course readings. Students are responsible for the material presented during course lectures.
3. Small Group Work. Small-group discussions and presentations are utilized to complement readings and lectures, providing students 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 and do not wait until close to the due date to initiate work. Thus, giving your peers the opportunity to respond in a timely manner.
4. Assessment. A variety of methods will be used to assess understanding of the material including exercises associated with each module and examinations. *Exercises may require group work.*

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 Schedule

The course is a synchronous, on-line course, i.e. course content will be released throughout the course according to the schedule; content will not be released early. Content is organized into modules. Modules will be released on Wednesday and completed the morning of the following Wednesday. Assignments are due on Wednesdays at 08:59 AM EDT/EST, and examinations will be available Friday – Wednesday during examination weeks, due Wednesday at 8:59 AM EDT/EST (EDT switches to EST 03NOV2019). This schedule is by design to afford students the flexibility to complete coursework and examinations on weekdays or weekends, with each module including days during two calendar weeks and business days following the weekend during which to ask questions. NOTE: The first week (21 – 27AUG2019) will be spent on the *Getting Started* module. The course schedule with topics, reading assignments, homework assignments, and the examination dates is shown on the next page.

PHC 6001: Principles of Epidemiology in Public Health

Fall 2019

Course Schedule

| Dates | Module | Topic | Readings | Assignments |
|---|-------------------|---|--|----------------------------|
| 08/21 – 08/27 | <i>Start Here</i> | Course Orientation | Syllabus | Syllabus & Canvas Quiz |
| 08/28 – 09/05 | 1 | Introduction to Epidemiology | Text, pages 1-32 | Exercise 1 |
| 09/04 – 09/10/2 | 2 | Measures of Frequency | Text, pages 33-56 | Exercise 2 In the News |
| 09/11 – 09/25 | 3 | Comparing Frequencies | Text, pages 57-76 | Exercise 3 In the News |
| 09/18 – 09/28 | 4 | Sources of Public Health Data Descriptive Epidemiology | Text, pages 77-151 | Exercise 4 In the News |
| Examination One: Open 09/27 – 10/02/2019 | | | | |
| 10/02 – 10/09 | 5 | Experimental Studies | Text, pages 153-159 Text, pages 181-210 | Exercise 5 In the News |
| 10/09 – 10/16 | 6 | Cohort Studies | Text, pages 159-163 Text, pages 211-236 | Exercise 6 In the News |
| 10/16 – 10/23 | 7 | Case-Control Studies | Text, pages 163-180 Text, pages 237-266 | Exercise 7 In the News |
| 10/23 – 10/30 | 8 | Bias & Effect Measure Modification | Text, pages 267-365 | Exercise 8 In the News |
| Examination Two: Open 11/01 – 11/06/2019 | | | | |
| 11/06 – 11/13 | 9 | Critical Review of Epi Studies | Text, pages 367-392 | Exercise 9 In the News |
| 11/13 – 11/20 | 10 | Epi Approach to Causation | Text, pages 393-417 | Exercise 10 In the News |
| 11/20 – 11/27 | 11 | Screening in Public Health Practice | Text, pages 419-447 | Exercise 11 In the News |
| 11/20 – 12/04 | 12 | Ethics in Epi Research | Text, pages 449-467 | Exercise 12 |
| Examination Three: Open 12/06 – 12/11/2019 | | | | |

Course Materials and Technology

Required Text: Aschengrau A and Seage III GR. *Essentials of Epidemiology in Public Health, 4th Edition*. Burlington, MA: Jones and Bartlett Learning, 2020.

Completion of assigned readings from this text is mandatory. Lectures will augment and reinforce important aspects of these reading materials. However, students are still responsible for any content from the assigned readings and exercises that is NOT covered in a lecture presentation. Examinations may cover any course content covered in assigned readings, exercises, and lectures.

The course website is located in Canvas. On the course site, the week's modules will be available at 9:00 AM each Wednesday. The module will consist of lecture slides and audio. In addition, there may be supplemental reading such as a manuscript posted to the course website as well as links to assignments and additional resources. The announcement and conference features will also be utilized.

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:

- Available 24 hours a day, 7 days a week
- (352) 392-HELP - select option 2
- helpdesk@ufl.edu (email)
- helpdesk.ufl.edu (website)

ACADEMIC REQUIREMENTS AND GRADING

Assignments

Exercises – 20 points each (240 total points; 40% of the course grade)

There is an exercise associated with the *Getting Started* module, a quiz regarding the course website and syllabus. You will need to take the quiz until you score 20 out of 20 points. At any time during the semester, corrections and/or addenda may be made or added to the course syllabus at the discretion of the instructor. Any changes to the syllabus will be promptly communicated to students via email and published on the course website, taking effect immediately from the time of communication until the end of the course or the next syllabus update. Dates for examinations and the way in which the course grade is calculated will not change.

There is an exercise associated with each of the remaining twelve modules that students will complete throughout the course. The exercises are intended to be active-learning opportunities that foster engagement with the course material during which students can practice applying the principles presented in the course. Students are encouraged, and at times required, to work together on exercises through discussion sections in Canvas, but each student's responses must be his/her/their own work. Exercises can be found by navigating to *Assignments* from the navigation bar or through the links included in each Module. Assignments are **due on Wednesdays by 08:59 AM EDT** (EST after 03 November 2019) at the end of each week they are assigned.

The exercises will vary in format throughout the semester. Formats include, but are not limited to, problem sets, group activities, participation in discussions, and on-line quizzes. Any one exercise can contain different types of activities – e.g., a discussion board and problem sets. Students may collaborate on exercises, however, each student must submit his or her own work. To earn *any* credit, exercises must be submitted *on time*. At the time of assignment, each exercise will provide the specific requirements for the

assignment and its submission as well as a rubric for how many points can be earned for successful completion and submission of the exercise.

Late exercise submissions will *not* be accepted.

Note that 20 points are associated with the *Getting Started* quiz and each exercise. The exercise portion of the grade however, is based on the *Getting Started* quiz score and the highest *eleven* exercise scores. Your lowest exercise score will not be used to calculate your final grade. Select exercises will include opportunities to earn bonus points throughout the semester. There are no other bonus or extra credit opportunities afforded in the course.

Current Events – 20 points each (60 total points; 10% of the course grade)

In addition to the exercises described above, each student will be required to provide two short presentations to his/her/their small discussion group. These presentations will require the review of a media presentation such as a newspaper or magazine article, social media post, or newscast related to epidemiology and application of course content to-date in the review. Students will sign up for two weeks during which to present during the semester. In addition, students will be required to comment on the presentations of their peers throughout the semester. Specific instructions will be provided each week throughout the course along with a rubric for how many points can be earned for successful completion and submission of the review.

Late submissions will *not* be accepted.

Students can earn up to 20 points for each of two presentations. An additional 20 points can be earned for feedback on peer posts throughout the semester; this will be assessed at the end of the semester.

Examinations – 100 points each (300 total points; 50% of the course grade)

Three closed-book, proctored examinations will be administered in this course (see course schedule). The examinations will consist of multiple choice, short answer, and quantitative problems intended to assess depth of understanding of the material. Examinations will focus on the course content covered since the previous examination; however, due to the nature of the discipline, you will be responsible for content presented earlier in the course as well. Calculators can be used during the examination, and you will be allotted two hours to complete the examination. See the section *Examination Proctoring Service* below and the HonorLock link on the Canvas site for more information on proctored examinations.

Grading

| Requirement | Due Date | Points (% of total grade) |
|----------------|---------------------------------|---------------------------|
| Exercises | See Schedule Above & Assignment | 240 (40%) |
| Current Events | See Schedule Above & Assignment | 60 (10%) |
| Examinations | See Schedule Above | 300 (50%) |
| Total | | 600 |

Point System Used (i.e., how course points translate into letter grades).

| Total Points Earned | % of Total Points Earned | Letter Grade | Grade Point Equivalent |
|---------------------|--------------------------|--------------|------------------------|
| ≥ 558 | ≥ 93% | A | 4.00 |
| 540 – 557 | 90 – 92.99% | A- | 3.67 |
| 522 – 539 | 87 – 89.99% | B+ | 3.33 |
| 498 – 521 | 83 – 86.99% | B | 3.00 |

| | | | |
|-----------|-------------|----|------|
| 480 – 497 | 80 – 82.99% | B- | 2.67 |
| 462 – 479 | 77 – 79.99% | C+ | 2.33 |
| 438 – 461 | 73 – 76.99% | C | 2.00 |
| 420 – 437 | 70 – 72.99% | C- | 1.67 |
| 402 – 419 | 67 – 69.99% | D+ | 1.33 |
| 378 – 401 | 63 – 66.99% | D | 1.00 |
| 360 – 377 | 60 – 62.99% | D- | 0.67 |
| < 360 | < 60% | E | 0.00 |
| -- | -- | WF | 0.00 |
| -- | -- | I | 0.00 |

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. 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>.

Examination Policy

Refer to the *Assignments* section for more detailed information regarding the composition of the course examinations. During examinations, students will be allowed to have a non-programmable, scientific calculator such as the Texas Instruments TI-30X IIS, available online or in stores such as Target and Walmart for about \$9. In addition, students may have blank scratch paper and a pen or pencil during examinations. Read more about the on-line proctoring services below, and refer to the course website for additional resources related to HonorLock.

Examination Proctoring Service

As this is an online course, examinations will be proctored through HonorLock. This user-friendly service ensures examination integrity and enables administration of remote online examinations. The College of Public Health & Health Professions will pay your proctoring fees, and no pre-scheduling is required.

In order to use the HonorLock service, students will need access to a computer to which they have some administrative rights to enable the proctoring service to function. In addition, the computer must have a webcam and microphone as well as the Google Chrome browser installed. Prior to taking an examination, students must follow these guidelines to register and take examinations:

- [HonorLock Student Proctoring](#)
- [HonorLock Student Guide](#)
- [HonorLock Student Preparation Checklist](#)

You can take your examination at any time during which the examination is open in Canvas. Plan to allot yourself not only the 120 minute examination period but also extra time during which to connect to the service and manage any technical issues that may arise. You are advised not to wait until the last minute to sit for the examination because you are at risk of the examination closing automatically before the full 120 minutes has elapsed, i.e. the examination will close at the time set in Canvas regardless of how many minutes you have been taking the examination. It is recommended that students use a wired internet connection for examinations to ensure a more reliable signal.

During the examination, no human proctor will appear. Rather, your camera will record the session. Students must plan to take their examination in an environment free of other people during the administration of the examination. Students should be prepared to show identification and pan the room

in which the examination will be taken. Additional instructions will be provided in the examination modules within Canvas.

Once you complete the examination, you will submit it and log out of Canvas. Your session will be audited by HonorLock. The recorded examination sessions will be reviewed as part of your final grade. Instances of cheating or inappropriate behavior will be considered violations of the Student Honor Code and will result in disciplinary action.

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. Gurka *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. At Dr. Gurka's discretion, the UF Director of Public Health Professional Education Programs may permit an extension of an exam that has already begun.

Note that any requests for make-up examinations 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 Dr. Gurka and Ms. Hardemon (hardemont@ufl.edu) within 24 hours of the technical difficulty if you wish to request a make-up.

No exercise submissions will be accepted past the deadline for *any* reason. Students are advised to access exercise instructions early each week and plan accordingly to ensure 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. Students may choose to submit partially completed exercises, resubmitting files as they are updated, to ensure at least partial credit is earned.

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 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

Professional and respectful behavior is expected of all students participating in this online course. Be aware that all exercises are due by the specified date and time. High speed internet and a web cam are essential for this online course and ensuring internet connectivity and bandwidth is *your responsibility*. Late submissions and/or inability to participate in examinations due to poor internet connectivity is unacceptable. Therefore, refrain from waiting until the due date to submit your assignments or take examinations as it will be difficult to impossible to accommodate your requests because of technical problems arising from your equipment. Other guidance regarding etiquette and expectations for course behavior is discussed on the course website.

Communication Guidelines

E-mail is the preferred mode of communication by which to contact Dr. Gurka. Use the e-mail function in Canvas, selecting both the instructor and teaching assistant as the recipients. Messages sent on business days prior to 4:00 PM EDT/EST will generally receive a response by 11:59 PM EDT/EST that day. Otherwise, messages will generally receive responses by 11:59 PM EDT/EST the next business day. *If you do not receive a response, this was an oversight, and you should send the message again to the instructor and teaching assistant.* In all correspondence related to this course, *type "PHC 6001:" in the subject line of your message* followed by a more specific subject to be discussed in the body of the e-mail message. This will assist Dr. Gurka and the teaching assistant in quickly identifying messages that relate to the course and facilitate timely feedback.

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>

Remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior. This includes obtaining materials from past iterations of the course.

Mid-Course Evaluation

Students in this course will be provided with the opportunity to provide feedback on the course mechanics and their learning experience. More information will be provided about a third of the way through the semester. This evaluation will occur as a way to identify ways in which the course may be improved for this cohort during this semester.

Online Faculty Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu by clicking on GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

SUPPORT SERVICES

Inclusive Learning Environment

Public health and health professions are based on the belief in human dignity and 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 contact Dr. Gurka or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu.

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must register with the Dean of Student's Office (<http://www.dso.ufl.edu>) within the first week of class. The Dean of Student's Office will provide documentation of accommodations to you, which you must then give to Dr. Gurka, as the instructor of the course, to receive accommodations. Please make sure you provide this letter to Dr. Gurka 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.

- You Matter We Care. Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team, which is staffed by Dean of Students and Counseling Center personnel, can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center.
- 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 available.
- 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 (352-392-0627 or <https://shcc.ufl.edu/>).

- Crisis intervention is always available 24/7 from the Alachua County Crisis Center (352-264-6789 or <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. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.
