

**University of Florida  
College of Public Health & Health Professions  
Syllabus**  
**PHC 6001: Principles of Epidemiology in Public Health (3 credit hours)**  
**Section 101E**

*This section is reserved for Epidemiology and Biostatistics students only*

Semester: Fall 2017

Delivery Format: Blended (Lectures online, Lab on campus)

Course Website: E-Learning in Canvas

Classroom: HPNP G-301

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Instructor: Ting-Yuan (David) Cheng, PhD

Room Number: CTRB 4213

Phone Number: 352-294-5495

Email Address: [tingyuan.cheng@ufl.edu](mailto:tingyuan.cheng@ufl.edu)

Class (lab) meeting time: Tuesdays 11:45 am to 1:40 pm

Office Hours: By Appointment

Preferred Course Communications: Canvas

Teaching Assistant: Mirsada Serdarevic

Email: [mserdarevic@ufl.edu](mailto:mserdarevic@ufl.edu)

Office Hours: Mondays 3 pm to 4 pm

Office hours are held in Collaboration Room, CTRB 4<sup>th</sup> floor (Department of Epidemiology)

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### **Prerequisites**

Graduate status or approval of instructor

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### **PURPOSE AND OUTCOME**

#### **Course Overview**

This course is an introduction to epidemiology for students studying any aspect of the health sciences. The principles and methods of epidemiology investigation, both of infectious and non-infectious diseases are included. The purpose of this course is to explain the place of epidemiology in the general health thinking and to communicate some understanding of the basic principles of epidemiology. Examples of the use of the principles of epidemiology will be presented so that the student 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/her public health work using epidemiological principles. This course is not intended to present the epidemiological aspects of the major diseases.

#### **Course Objectives and/or Goals**

1. Apply the basic terminology and definitions of epidemiology
2. Calculate basic epidemiology measures
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 infectious and chronic disease 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
11. Communicate epidemiologic information to lay and professional audiences

## **Blended Learning Statement**

### **Introduction to Blended Learning**

A Blended Learning class uses a mixture of technology and face-to-face instruction to help students maximize their learning. Blended learning typically involves multiple technologies such as E-Learning systems, online video, and web assignments for the communication of information. Knowledge content that would have traditionally been presented during a live class lecture is instead provided online before the live class takes place. This allows more of the face-to-face time to focus on the higher levels of learning. These rich interactions with the instructor can be used to help students think critically, obtain expertise, and practice clinical reasoning.

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

Students are expected to come to class prepared by completing all out-of-class readings and assignments. The coursework outside of class typically lays a foundation of knowledge or gives students practice needed to engage in higher levels of learning during live class sessions. During the face-to-face class time, 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 face-to-face 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.

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## **DESCRIPTION OF COURSE CONTENT**

### **Course Materials and Technology**

Required Text: Essentials of Epidemiology in Public Health, 3<sup>rd</sup> Edition by Ann Aschengrau, ScD, and George R. Seage III, DSc. Copyright 2014, ISBN: 978-1-284-02891-1

Additional Text (Not required): Epidemiology: An Introduction, 2<sup>nd</sup> Edition by Kenneth J. Rothman. Copyright 2012, ISBN: 9780199754557

Several of the lab sessions will involve the use of a laptop computer or tablet. Students will work in groups so it is possible to participate in lab without a portable computer but it is highly recommended that you have one.

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>

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## **Course Requirements/Evaluation/Grading**

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

You will complete 12 post-module quizzes during the semester. These are open-book, untimed quizzes that 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 should re-take the quiz until you have achieved a score of 100%. One post-module quiz grade will be dropped from your final grade.

### **2 Exams – 45% of the course grade (20% midterm, 25% final)**

The format for these exams varies, including multiple choice questions, matching questions, and short answer questions. You will have 90 minutes to complete each exam. **Exams are not cumulative. Exams are closed book. One letter-size paper is allowed for notes.** You may bring a non-programmable calculator to the exam. You must be present in class to take exams. Make-up exams will not be given except in extreme circumstances.

**11 assignments – 15% of the course grade (equal weighting for each assignment)**

There are 11 assignments that will be completed as homework; your highest 10 scores will count toward your grade and the lowest score will be dropped. Assignments are weighted equally to each other. A grading rubric will be posted for each assignment.

**Individual Readiness Assessment/Quiz – 15% of the course grade (equal weighting for each assessment)** There will be 6 team-based learning (TBL) sessions during the semester. Each of those sessions will start with an Individual Readiness Assurance Test. This is a closed-book, closed-note assessment of your understanding of the material presented in the module lectures. Your lowest score will be dropped and 5 assessments will be weighted equally to be worth 15% of your course grade. The TBL process will be explained and demonstrated prior to the first TBL session.

**Group Readiness Assessment/Quiz – 15% of the course grade (equal weighting for each assessment)** The second part of each TBL session will be a group Readiness Assurance Test. You will retake the Individual Readiness Assurance Test as a group, still as a closed-book, closed-note assessment, and agree on one answer for each question. One lowest score will be dropped as a team. You will get team scores that are equally weighted among 5 assessments and are worth 15% of your course grade.

**Epidemiology in the News – 2.5% of the course grade**

Your group will select a week when you'll present for 10 minutes on a current topic in epidemiology that has been in the news recently, and that related to the material we covered in class within the past two weeks. This might be an outbreak that has occurred, an important study or clinical trial result, or a policy or legal issue related to epidemiology studies. You should prepare no more than five slides to accompany your presentation, and all members of your group will present. Groups will be assigned a presentation date after the second lab class.

**Peer and Instructor Evaluation – 2.5% of the course grade**

You will actively be working in teams during the semester and your own level of preparation for the lab sessions is critical to your team's success. The peer evaluation component will allow your team members to give you feedback on your contributions. Your compiled score from your team and from the instructor is worth 2.5% of your course grade.

**Attendance**

There are 11 required lab classes during the semester (plus 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 then you must inform the instructor in advance to receive an exception. If you miss a lab session for illness or for serious family emergency then you will be expected to provide a doctor's note after the missed session. Missing a class session without an acceptable reason will result in loss of 3% of your final course grade. Missing three or more lab sessions may result in a failing grade for the course. For each time you arrive in lab late (after the class period has begun) you will lose 1% from your final grade. Arriving more than 20 minutes late is considered to be a missed lab, so be on time.

## Grading

The course requirements are presented in percentages above and add up to 100% of the course grade. Final grades follow the scale in this table:

Percent of Course Points (out of 100%)	Letter Grade	Grade Point Equivalent
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

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>

## Topical Outline

Dates	Event	Homework
8/22	<a href="#">Intro Lab</a> • Course Intro, Class icebreaker	
Module 1 Open 8/22	The Approach and Evolution of Epidemiology	1. Post-module assessment 2. Module 1 Assignment due 8/28
8/29	<a href="#">Module 1 Lab</a> • Outbreak Investigation exercise	
Module 2 Opens 8/29	Measures of Disease Frequency	1. Post-module assessment 2. Module 2 Assignment due 9/4
9/5	<a href="#">Module 2 Lab</a> • Interpreting epi data • Measures of Disease Frequency exercise	
Module 3 Opens 9/5	Comparing Disease Frequencies	1. Post-module assessment 2. Module 3 Assignment due 9/11
9/12	<a href="#">Module 3 Lab</a> • <b>Disease Frequency TBL (Quiz)</b> • Disease Frequency exercise	
Module 4 Opens 9/12	Sources of Public Health Data, Disease Transmission, Descriptive Epi	1. Post-module assessment 2. No assignment this week!
9/19	<a href="#">Module 4 Lab</a> • Sources of Public Health Data – Florida Charts	
Module 5 Opens 9/19	Screening	1. Post-module assessment 2. Module 5 Assignment due 9/25
9/26	<a href="#">Module 5 Lab</a> • <b>Screening TBL (Quiz)</b> • Screening exercise	
<b>10/3 – Mid-term Exam (Covers modules 1 through 5)</b>		

Module 6 Opens 10/3	Overview of Epi Study Designs, Experimental Studies	1. Post-module assessment 2. Module 6 Assignment due 10/9
10/10	<u>Module 6 Lab</u> • Randomized Trial Exercise	
Module 7 Opens 10/10	Cohort Studies	1. Post-module assessment 2. Module 7 Assignment due 10/16
10/17	<u>Module 7 Lab</u> • <b>Cohort Studies TBL (Quiz)</b> • Cohort studies exercise	
Module 8 Opens 10/17	Case-Control Studies	1. Post-module assessment 2. Module 8 Assignment due 11/23
10/24	<u>Module 8 Lab</u> • <b>Case Control Studies TBL (Quiz)</b> • Case Control studies exercise	
Module 9 Opens 10/24	-Bias -Confounding	1. Post-module assessment 2. Module 9 Assignment due 10/30
10/31	<u>Module 9 Lab</u> • <b>Bias and Confounding TBL (Quiz)</b> • Bias and Confounding exercise	
Module 10 Opens 10/31	Effect Modification	1. Post-module assessment 2. Module 10 Assignment due 11/6
<b>11/7 – APHA Meeting, No Lab Session</b>		
Module 11 Opens 11/7	Causation	1. Post-module assessment 2. Module 11 Assignment due 11/13
11/14	<u>Modules 10 &amp; 11 Lab</u> • <b>Effect Modification &amp; Causation TBL (Quiz)</b> • Effect Modification & Causation exercise	
Module 12 Opens 11/14	Critical Reading of Epi Papers	1. Post-module assessment 2. Module 12 Assignment due 11/20 3. Final exam practice questions
11/21	<u>Module 12 Lab</u> Final exam practice questions review	
<b>11/28 – Final Exam (Covers modules 6 through 12)</b>		

## STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

### Expectations Regarding Course Behavior

Professional and respectful demeanor is expected of all students. Students are expected to arrive to class on time and to stay for the duration of the class period. Note that there is a percent penalty for arriving to lab late. Students should refrain from having conversations with classmates when the Instructor or TA is speaking to the class. Phones should ideally be turned off, but may be placed on vibrate if you are a physician who is on call. Phones should be stowed away (out of sight) during class time. Computer work should be related to class activities.

## **Communication Guidelines**

The best way to communicate with me is by email. Please give me up to 24 hours during the work week to respond to your email. Posting general questions to the Discussion board on Canvas is expected to get an answer more quickly.

Please address me as Dr. Cheng or Professor Cheng, and let me know how you prefer to be addressed. Email correspondence should follow the etiquette of business emails. If you would like to meet in person then please make an appointment to see me; this ensures that we will have an uninterrupted time to meet.

## **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/>

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 though 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/>.

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## **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."

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