

University of Florida
College of Public Health & Health Professions
PHC 6003: Epidemiology and Prevention of Chronic Disease and Disability (3 credit hours)
Spring 2021
Delivery Format: Online (Blended format Asynchronous + Synchronous)
Syllabus

Instructor Name: Thomas A Pearson MD, MPH, PhD

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Graduate Assistants: Erta Cenko MSPH, ertacenko@ufl.edu

Preferred Course Communications: Discussion carried out via Canvas. Email correspondence should copy both Dr. Pearson and Ms. Cenko to assure prompt response.

Prerequisites

Introductory Epidemiology Course preferred or by consent of instructor.

Course Overview

This course will focus on the distribution and determinants of major chronic diseases and their risk factors. Chronic diseases have been the leading cause of mortality for over 100 years and contribute to the majority of disability and health care visits in the US and the rest of the industrialized world. The list of individual chronic diseases of public health importance is extensive. This course will focus on conceptual and methodological issues related to the study of most chronic diseases. Cardiovascular disease will be the model for many of the epidemiologic examples used in this course, due to the extensive and established nature of its evidence base. The concepts and methods illustrated are pertinent to most other chronic diseases, and individual courses on their epidemiology can be taken for disease-specific content.

Course Objectives and/or Goals

1. To understand the multifactorial etiology and pathophysiology of chronic diseases.
2. To know the various epidemiologic study designs and their strengths/weaknesses in the study of etiology and natural history of chronic diseases.
3. To be able to define incident and prevalent cases of select chronic diseases, using traditional and clinical epidemiologic research methods.
4. To understand the concept of "risk factor" as it pertains to chronic diseases and the means to define them.
5. To be able to access the evidence base for interventions at the individual and community levels which reduce the risk of chronic disease incidence and mortality.
6. To understand how epidemiologic studies of chronic disease are translated into diagnosis, treatment and prevention programs and policies.
7. To be able to read, interpret, and critique published reports of epidemiologic studies of chronic disease.

Instructional Methods

1) **Lectures:** This is an online course that includes viewing of recorded lectures, quizzes, completion of written assignments, and participation in an asynchronous discussion board. Students will independently view recorded lectures and complete assigned readings.

2) **Readings:** Assigned readings in the required textbook or published literature are intended to supplement the lectures. Additional readings may be added during the course.

3) **Assignments:**

a) **Synchronous meetings via Zoom:** Three one hour meetings will entail a Course Introduction and discussions of methods and risk factor sections of the course as well as prior to the examination.

b) **Asynchronous discussion board sessions:** Students will be required to engage in the asynchronous discussion board throughout the week, after reading the published material and viewing the recorded lectures.

c) **Take home essay tests.** Two take home quizzes will be required but following their grading and review, will also be the topic of discussion.

d) **Team presentations:** In teams of 2-4 students, a twenty minute presentation will focus on a topic regarding a major chronic disease. The student teams will obtain preapproval of the topic by course director/graduate assistant and submit an organized twenty minute presentation. These presentations will be carried out in the final two weeks of the course via synchronous Zoom meetings. The presentations are required in Power Point version. Each student should participate equally in the presentation.

PHC 6003: Epidemiology of Chronic Disease and Disability Topical Outline/Course Schedule

The class assignments and discussions are asynchronous, unless noted otherwise in the syllabus.

Week/Date	Topic	Lecturer	Required Readings	Assignment
Week 1 Jan 11	A. Course Introduction Synchronous meeting I (1 hour, through Zoom)	Pearson/Cenko	Course Syllabus	- Student introductions through the discussion board are encouraged
	B. Global Burden of Chronic Disease	Pearson	US Burden of Disease (1)	-
	C. Biology of Chronic Disease: Atherosclerosis	Pearson	Harris R., Chapter 1, 3	-

Week 2 Jan 18	A. Chronic Disease Surveillance B. Cardiovascular Disease by County C. Florida Population Databases and UF Libguide	Pearson Pearson Meyer	Harris R., Chapter 2 JAMA (2) http://guides.uflib.ufl.edu/c.php?g=147290&p=966872	- - Identify and discuss 3 Datasets in LibGuide
Week 3 Jan 25	A. Observational Studies of Chronic Disease B. Epidemiology of Coffee – Drinking C. Predictive Risk Evaluation: Lifetime Risk	Pearson Pearson Cenko	Framingham Heart Study (3) LaCroix (4) Lifetime risk (5)	- Critique discussion Calculate your lifetime risk of CVD
Week 4 Feb 1	A. Randomized Clinical Trials B. Randomized trials C. Selection of Topic for Team Report	Pepine Pearson Cenko	CANTOS Trial (6) Harris R. (chapter relevant to team presentations)	Critique of RCT Identify team and topic
Week 5 Feb 8	A. Community Intervention Trials B. Prevention of Heart Disease and Stroke at Community Level C. Evaluation of community interventions. D. Synchronous meeting II (1 hour, through Zoom)	Pearson Pearson Pearson/Cenko	Harris R., Chapters 3, 6 AHA Community Guidelines (7) Franklin Co. Study (8)	Take home essay I due - Discussion
Week 6 Feb 15	A. Diet and Nutrition B. Epidemiology and Prevention of Neural Tube Defects C. Epidemiology of Chocolate	Pearson Rasmussen Pearson	Harris R., (chapter relevant to team presentations)	- - Discussion
Week 7 Feb 22	A. Family history and genetics B. Chronic Disease Pedigree	Pearson Cenko	Genetic Epidemiology (9) CDC Family History Pedigree (10)	Submit Pedigree Discussion

Week 8 Mar 1	A. Social Determinants of Health B. Precision Public Health C. Place Matters: UF Program in Precision Public Health	Pollack Pearson Pearson	 Khoury et al (11)	- - Discussion
Week 9 Mar 8	A. Tobacco B. Alcohol use C. Policy Exercise	Lopez-Quintero Pearson Pearson	Harris R., Chapter 13 Harris R., Chapter 20 AHA Guidelines	- - Development of Alcohol Guidelines/Policy
Week 10 Mar 15	A. Obesity B. Diabetes/Pre-diabetes C. Diabetes Risk Calculator	Perri Donahoo Donahoo/ Pearson	Harris R., Chapter 42 Harris R., Chapter 41 Gurka et al (13)	Take Home Essay II due - Calculating diabetes/CV risk
Week 11 Mar 22	A. Hypertension B. Hypertension guidelines C. Class discussion	Cooper-Dehoff Pearson Cenko	Harris R., Chapter 10 AHA/ACC Guidelines (14)	- - Discussion
Week 12 Mar 29	A. Lipid and Lipoprotein Disorders B. 2018 Cholesterol guidelines C. Team Presentations I (2 hours, synchronous Zoom)	Pearson Pearson Pearson/Cenko	AHA/ACC Guidelines(15) Harris R., Chapters specific to student presentations	Discussion of Guidelines - Team Presentations and Discussion
Week 13 Apr 5	A. Physical Activity B. US Physical Activity Guidelines D. Team Presentations II (2 hours, synchronous Zoom)	Cenko Cenko Pearson/Cenko	Harris R., Chapter 46 US Guidelines(16) Harris R., Chapters specific to student presentations	- Discussions of Guidelines Team Presentations and Discussion

Week 14 Apr 12	A. Inflammation and Related Conditions	Pearson	Harris R., Chapter 47	-
	B. Prevention of Chronic Disease	Pearson	AHA/ACC Guidelines (17)	-
	C. Synchronous Meeting III (1 hour, via Zoom)	Pearson/Cenko		Discussion
Week 15 Apr 19	A. Final examination (due on Apr 25)	Cenko		
	B. Course reviews and evaluations	Cenko		

Course Instructors and Invited Lecturers

- Thomas A. Pearson, MD, MPH, PhD
- Michael Perri, PhD, ABPP
- Catalina Lopez-Quintero, MD, PhD
- William. T Donahoo, MD
- Sarah Meyer, MLIS
- Rhonda Cooper-DeHoff, Pharm.D., M.S., FAHA, FACC
- Sonja Rasmussen, MD, MS
- Erta Cenko, MSPH
- Jacqueline Pollack, MPH

Course Materials and Technology Requirements

The required text is: Epidemiology of Chronic Diseases: Global Perspectives, Randall E. Harris, Publisher: Jones & Bartlett Learning, ISBN: 9781449653286

Completion of the assigned readings from this text is mandatory. Other readings will be selected from articles published in peer reviewed journals. Lecture presentations will highlight, review, and expand upon the most important aspects of the assigned reading materials. Students are still responsible for mastering any content from the assigned readings, exercises, or assignments that is NOT covered in a lecture presentation. Exams will cover all course content covered in assigned readings, exercises, discussions, and lecture presentations.

Articles and other resources will be posted on e-Learning.

1. The US Burden of Disease Collaborators. The State of US Health, 1990-2016. JAMA 2016; 316:1444-1472.
2. Dwyer-Lindgren, L, Bertozzi-Villa A, et al. US County-Level Trends in Mortality Rates for Major Causes of Death, 1980-2014. JAMA 2016; 316:2385-2401
3. Kannel WB, et al. Factors of Risk in the Development of Coronary Heart Disease—Six-Year Follow-up Experience: The Framingham Study. Ann Intern Med. 1961;55:35-50.

4. LaCroix A. et al, Coffee Consumption and the Incidence of Coronary Heart Disease. NEJM 1986; 315:977-82.
5. Barry JD, et al. Lifetime Risks of Cardiovascular Disease. NEJM 2012; 366:321-9
6. Ridker PM, et al. Antiinflammatory Therapy with Canakinumab for Atherosclerotic Disease NEJM 2017; 377:1119-1131
7. Pearson TA, et al. American Heart Association Guide for Improving Cardiovascular Health at the Community Level, 2013 Update. Circulation 2013; 127:1730-1753.
8. Record B, et al. Community-wide Cardiovascular disease prevention progress and health outcomes in a rural county, 1970-2010. JAMA 2015; 313:147-155.
9. Fallin MD, et al. Genetic Epidemiology and Public Health: The Evolution From Theory to Technology: AM J Epidemiology of 2016; <https://doi.org/10.1093/aje/kww001>
10. My Family Health Portrait- CDC: <https://phgkb.cdc.gov/FHH/html/index.html>
11. Khoury MJ, et al. Am J Prev Med 2016; SO: 398-401.
12. Pearson, TA. Alcohol and heart disease. Circulation 1986; 94:3023-5.
13. Gurka MJ et al. Independent Associations Between Metabolic Syndrome Severity and Future Coronary Heart Disease by Sex and Race. Diabetologia 2017; 60:1261-127
14. Whelton, PK et al. Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. Hypertension 2017;71:e13-e115.
15. Grundy SM et al. AHA/ACC Guidelines on the management of blood cholesterol: Circulation 2018; DIO: 10.1161/CIR.0000000000000625.
16. Physical Activity Guidelines Advisory Committee Report Part A: Executive Summary. Nutr. Rev 2009;67; 114-20.
17. Pearson TA, et al. Markers and inflammation and cardiovascular disease. Circulation 2003; 07:499-511.

Required Equipment

Computer with high-speed internet access and use of a supported browser. Please refer to the student computing requirements listed on the Online Student Resources page. This course is delivered entirely online using the University of Florida's e-Learning in Canvas Course Management System. To access this course, you will use your Gatorlink ID and password to login to the course (via Canvas).

Technical Support

For technical support for the materials posted in the course e-Learning site, activities, and assessments, please post in the appropriate discussion or contact:

Name: Online MPH Program

Email Address: email Mark Hart and Truly Hardemon through Canvas Inbox

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

Phone Number: (352) 392-HELP (4357) Option 2

Email: helpdesk@ufl.edu

Webpage with Chat: UF Computing Help Desk

ACADEMIC REQUIREMENTS AND GRADING

The evaluation of student performance in PHC 6003 will consist of four parts:

Final examination (30%): This will be an online multiple choice question examination to assess comprehension of course materials and cognitive learning objectives. Material for the entire course will be assessed. The exam is closed book and three hours will be allotted to complete it.

Two take-home essay tests: (30% -15% each) This will be an open-book test with essay format. These essays will test comprehension and skill objectives for the course. Individual essays will be graded with comments and a discussion for student questions will be held one week after the examination is submitted.

Team presentations: (25%) These will be a 20 minute oral presentation by teams of 2-4 students. Team will be asked to present a formal discussion of an issue in the chronic disease of their choice, according to those chapters in the Harris et al textbook. The same grade will be given to all members of the team unless all students do not contribute to the presentation. This will assess the comprehension skills and learning objectives.

Asynchronous discussion board participation and class synchronous participation: (15%) This will assess engagement of the student in discussion of the assignments, essays tests, and team presentations.

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

Points earned	94.0	90.0	87.0	84.0	80.0	77.0	74.0	70.0	67.0	64.0	61.0	0
	-	-	-	-	-	-	-	-	-	-	-	-
	100.0	93.9	89.9	86.9	83.9	79.9	76.9	73.9	69.9	66.9	63.9	60.9
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

Please be aware that a C- is not an acceptable grade for graduate students. 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. In addition, the Bachelor of Health Science Program does not use C- grades.

Letter grade to grade point conversions are fixed by UF and cannot be changed.

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

For greater detail on the meaning of letter grades and university policies related to them, see the Grading and Grade Policies posted by the Registrar's Office.

Online Synchronous Sessions Policy:

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students

to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Response/feedback policy

A member of the instruction team will respond to communications (emails, phone calls, communications through Canvas) within 24 hours during the work week, and within 48 hours during weekends or university closures. If closures are due to inclement weather or emergency, responses may be slower.

Exam Policy

Policy Related to Make up Exams or Other Work

Students will be allowed to make-up quizzes, assignments, and discussion board activities for acceptable reasons as described in the Graduate Catalog. See:

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>

If you are unable to submit an assignment on time, it is your responsibility to contact the instructor through Canvas mail as soon as possible to request an alternate arrangement and due date. If an alternate arrangement is not requested or offered then no credit will be given for the assignment. Any approved make-up assignments should be submitted to the instructor through Canvas mail.

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

Policy Related to Required Attendance

This is an online course and therefore, attendance means you are expected to complete the course learning activities so that you meet the established deadlines. In addition, you are required to participate in all the synchronous class meetings. 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>

Students who wish to drop from the course must do so by the drop/add deadline established by the Office of the University Registrar. Students must not assume they will be automatically dropped if they fail to participate in the course learning activities.

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

Communication Guidelines

The preferred mode of communication with the course instructors is via email feature on Canvas. While emailing instructors, please make sure to copy both instructor and graduate assistant on the mail. This way we can ensure prompt response to your emails.

Participation

Professional and respectful behavior is expected of all students participating in this course. Please be aware that all assignments and homework are due on the specified date and time.

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 Codes information at the Dean of Students Office website or the Academic Expectations information at the Graduate School website for additional details.

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

Online Faculty Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online Faculty Course Evaluations. 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.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require coursework 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. Online and in person assistance is available.

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 10

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 Student Health Care Center website.

Crisis intervention is always available 24/7 from the Alachua County Crisis Center at (352) 264-6789.

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 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.

Campus Resources:

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.