

University of Florida
College of Public Health & Health Professions Syllabus
PHC7007: Cancer Epidemiology (3 credit hours)

Spring 2026

Monday 11:45-12:35, Wednesday 10:40-12:35

On-Campus

Instructor Name: Dr. Volker Mai

Room Number: PPHP G-307

Phone Number: 2739398

Email Address: *vmai@ufl.edu*

Office Hours: Monday/Wednesday 12:35-1PM

Preferred Course Communications: *email via e-learning platform*

Prerequisites

PHC 6001 and PHC 6052, OR PHC 6740 and PHC 6741-L, or permission from the instructor

PURPOSE AND OUTCOME

Course Overview

Cancer epidemiology is designed to help students develop the interdisciplinary skills required for evaluating various existing and hypothetical public health interventions aimed at reducing the burden of cancer in the US and worldwide. The course is taught in a combined lecture and discussion format.

Relation to Program Outcomes

The purpose of this course is to provide students with skills required to apply evidence-based approaches to analyze topics in cancer epidemiology and develop projects targeting emerging concerns. The course is designed to train students in system thinking, scientific communication and efforts to develop population-based approaches to promote health by lowering the burden of cancer.

Course Objectives and/or Goals

After successful completion of this course, students will be able to:

- 1) Evaluate the impact of various cancers on public health.
- 2) Link molecular mechanisms with specific cancers to identify prevention targets.
- 3) Compare and contrast exposures associated with cancer.
- 4) Compare and contrast major mechanisms of carcinogenicity.
- 5) Evaluated effectiveness of various public health measures to reduce cancer burden.
- 6) Summarize mechanisms of defenses against carcinogenicity.
- 7) Understand the special concern of carcinogen exposure in immune compromised individuals.
- 8) Compare and contrast the genomic basis of carcinogenicity using web-based genome

Instructional Methods

The course will familiarize students with various exposures associated with the risk of developing cancer with emphasis on a population perspective. While a focus will be on opportunities for prevention, we will explore cellular mechanisms contributing to the development of various cancers and describe associated pathologies. Cancer epidemiology is taught in a combined lecture and discussion format. Each student, with guidance, will choose a current problem in cancer epidemiology/prevention and, following an initial presentation of the problem, develop an approach to the problem

that is discussed in class. After incorporating relevant feedback, the student will present a formal presentation on a prevention approach and submit a term paper that represents a short proposal for a research project. In addition to conventional lectures on fundamental topics of cancer epidemiology relevant scientific papers describing recent advances in the field will be discussed.

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule

Week	Dates	Topic	Reading topic
1	01/12-01/14	Introduction Trends in cancer incidence	ACS cancer statistics (yearly update)
	01/19	MLK – no class	
2	01/21	Cellular aspects of carcinogenesis	P53 tumor suppressor
3	01/26-01/28	Cancer immunology and pathology	Cancer immunity (Nature reviews)
4	02/02-02/04	Infectious causes of cancer	H.pylori and cancer
5	02/09-02/11	Environmental exposures	Cell phone use and risk of brain cancers
6	02/16-02/18	Radiation and occupational exposures	Home radon exposure and lung cancer risk
7	02/23-02/25	Smoking and cancer risk	Effective smoking cessation approaches
8	03/02-03/04	Effects of diet/obesity/exercise on cancer risk	Trends in obesity
9	03/09-03/11	Hormones and carcinogenesis Midterm Exam TBD	HRT and breast cancer
10	03/14-03/21	SPRING BREAK	
11	03/23-03/25	Behavioral change in cancer prevention	Increasing physical activity levels through infrastructure
12	03/30-04/01	Health disparities and cancer	Increased burden of cancers in African Americans
13	04/06-04/08	Cancer treatment successes and risk of 2nd cancers	Risk of secondary cancers after childhood cancers
14	04/13-04/15	CAM in cancer prevention and treatment	Alternative methods for preventing and treating cancer
15	04/20-04/22	Term project presentations	
17	04/25	Final Exam TBD	

Course Materials and Technology

Textbooks: The textbook used in this course is “Textbook of Cancer epidemiology”, Adami, Hunter, Trichopolous 2nd edition, Oxford Press.

Scientific readings: Readings will be determined collaboratively based on students needs, interests, and the evolving direction of class discussions. At the beginning of the semester, students will help identify topics of focus, and together we will select relevant scholarly and professional materials. This approach is designed to develop students’ ability to locate, evaluate, and engage with appropriate sources within their area of interest.

ACADEMIC REQUIREMENTS AND GRADING

Assignments

Throughout the semester students will have graded as well as ungraded assignments that include book chapter readings, scientific papers, seminar reviews and term project updates (10% of grade)

Grading

Requirement	Due date	Points or % of final grade (% must sum to 100%)
Midterm exam (in class)	TBD	20%
Final exam	TBD	30%
Assignments	TBD	10%
Class participation	TBD	10%
Term project	TBD	20%
Presentation	TBD	10%

Percentage Earned	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
Below 60	E

Please be aware that a C- is not an acceptable grade for graduate students. The GPA for graduate students must be 3.0 based on 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if based on credits in courses numbered 5000 or higher that have been earned with a B+ or higher.

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

More information on UF grading policy may be found at:
<https://gradcatalog.ufl.edu/graduate/regulations/#Grades>

Exam Policy

We will have two exams: 1) an in-class midterm exam with material covered up to this point and 2) a take home open book exam covering all material covered throughout the semester.

Policy Related to Make Up Exams or Other Late Work

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. I encourage you to please reach out to the instructor if circumstances arise where you need to be absent or submit late work. I will try to balance professionalism with compassion so that we can make alternative plans, when necessary, to help you be successful in this course while prioritizing your emotional and physical well-being. If possible, please reach out before missing a class or a quiz or test.

It is my intent that all quizzes and tests will be turned in on time (see dates on course schedule). Assessments cannot be made-up except in the case of circumstances that meet the criteria of the University of Florida policy for an excused absence. However, as described above, please reach out if special circumstances occur, and I will work with you as best as possible.

In the event of an absence, inform the instructor as early as possible prior to the class. For all unplanned absences because of accidents or emergency situations, students should contact their instructor as soon as conditions permit. If an absence for one of the above reasons results in missing an exam or quiz, contact the instructor to arrange a make-up exam or quiz, which will typically take place within one week of the due date.

The general policy for late work is that your final points will be reduced by 10% a day (starting immediately after the missed deadline). This penalty can be waived with instructor discretion.

Course Policy Related to Required Class Attendance

This is an interactive class and students are expected to be present and to participate in all class sessions. Students who know they will need to miss a class session should discuss this with the instructor prior to the date of the class. Students with unexpected absences should discuss needed make-up work with the instructor as soon as they can. Students with more than one unexcused absence will have a 5% reduction in their final grade for each subsequent unexcused absence.

Policy Related to AI Use in This Course

When authorized by the course director, students may use AI technologies in the completion of coursework as long as they cite all such use by naming the technology and how it was employed. Students assume full responsibility for all content, including errors and omissions. Assistive technology authorized as part of an accommodation for a disability is always permitted.

Course instructors may adjust limitations on AI assistive technology use and must communicate any limitations to students sufficiently in advance of the assignment due date. Failure to cite the use of AI assistive technology, or use of the technology disregarding specific course limitations is considered academic misconduct. **The use of AI on assignments, essays/reflection papers, exams, and quizzes when prohibited by course or college instructions is considered cheating** and students are violating the UF Regulations 4.040 [Student Honor Code](#) and [Student Conduct Code](#).

It is important to note that many generative AI models (e.g. ChatGPT, ChatSonic, Google Bard etc) place any information that they are provided with into the public domain. When using such tools, you must therefore ensure that they are **never provided with confidential information**. UF AI systems (e.g., Co-Pilot, NaviGator) should never be provided with confidential information. For the avoidance of doubt, the use of such tools is prohibited for generating any confidential communications, including, but not limited to, communications relating to patient records, clients, students and intellectual property. You are also reminded that you should always review the terms and conditions of any third-party software you use (e.g. proof-reading tools) to ensure that any data they are provided with is appropriately protected. Always verify information and sources generated by AI tools. AI has been known to generate false information and to cite non-existent sources. Also, because AI-generated text mines people's intellectual property without appropriate credit, this raises ethical concerns.

It is not acceptable to use generative AI for reflective writing, as by its very nature, the process of reflective writing demands that you actively engage in the writing process. Delegating this to a natural language processing algorithm may produce convincing outputs but does not demonstrate development in your professional practice.

Students are responsible for understanding their dynamic data stewardship responsibilities to minimize personal, college, and university risk.

[UF Integrated Risk Management – CHATGPT Privacy, Factual Accuracy and Usage Guidelines](#)

ACADEMIC POLICIES & RESOURCES

University academic policies and resources can be found at: <https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

Students are expected to participate actively in class, which requires completing assignments for each module on time before the start of each class meeting. Students shouldn't be afraid to be critical but remain respectful while

participating in discussions. Students should inform the instructor before class of any absences or reasons for not having completed assignments.

Communications Guidelines

All communications outside class meetings should be through e-mail and e-learning discussion threads and remain relevant to the broader context of cancer epidemiology

PHHP Student Resources

PHHP's UPTurn (Unified Pathways to Support Wellness) program is a *no-cost mental health and wellness program* that is offered year-round to all PHHP students (undergraduate, graduate and professional level) and students (from any college) who are enrolled in PHHP courses. UPTurn advisors support students on their wellness journeys by curating individualized plans (resources and support) to help them manage academic, social, emotional, and health-related stress.

Interested students are paired with an UPTurn advisor, who meets with each student *virtually* (Zoom, Teams, phone) or *in person* (private office/room in HPNP) for a 45-minute consultation, followed by (if desired):

1. Up to 4 follow-up skills-building visits
2. When needed and appropriate, up to 10 psychotherapy sessions after completion of the 4 follow-up skills-building visits

Note: UPTurn is NOT a crisis/emergency resource. Students who are in crisis are strongly encouraged to use UF's existing crisis support resources, which are listed here: <https://counseling.ufl.edu/services/crisis/>

Students can learn more about UPTurn and request an appointment here: <https://php.ufl.edu/student-resources/upturn-wellness-program/>

Any questions regarding UPTurn can be directed to upturn@php.ufl.edu or (352) 273-6850.

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."
