

CB7430 Course Syllabus

Course information

- Course title: Cancer Epidemiology
- Subject area code: CB
- Course number: 7430
- Course section: N/A
- Meeting day/time: Tuesdays 2:30-4:10pm (2 credits)
- Semester/year: Fall 2025
- Course format: In-person
- Method(s) of instruction: Class time will be split between lectures, journal-club style article discussions, and student-led presentations. Students should be prepared to participate in all discussions. The class will be divided into four main sections based on lecture material: (1) the burden of cancer, (2) cancer biology and genetics, (3) causes of human cancer, and (4) primary and secondary prevention strategies. Student presentations will begin the week of February 4, 2025.

Faculty contact information

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Course materials

Required textbook(s)

- Articles and lecture notes will be posted on Canvas.

Optional textbook

- Aschengrau A, Seage GR. Essentials of Epidemiology In Public Health.

Library material(s)

- N/A

Required and optional readings for assignments and exams

- N/A

Course details

Description

This 2-credit course will serve to introduce graduate level students in public health, cancer biology, and medical sciences to the principal concepts and methods used in cancer epidemiology. The course will review important measures of cancer burden (prevalence, incidence, mortality) by race and ethnicity in the United States and worldwide as well as the sources data for these estimates. Students will receive an introduction to cancer genetic epidemiology as well as the major causes of human cancer (tobacco, obesity, diet, alcohol, viral and bacterial agents and ultraviolet radiation). As part of the course curriculum, students will be required to review and provide critical appraisal of selected literature in innovative areas of cancer research.

Prerequisites

None. However, FPH 7240 “Introduction to Epidemiology” is strongly recommended by the instructor. For students who have not taken an introductory epidemiology course, an introductory epidemiology textbook is recommended (e.g. Aschengrau A, Seage GR. Essentials of Epidemiology In Public Health.) for reference.

Major and minor topics to be covered

- National and international cancer burden
- Study designs in cancer epidemiology
- Cancer biology & genetics overview
- Well established causes of human cancer
- Primary and secondary cancer prevention
- Racial disparities in cancer

Learning outcomes/objectives

- LO1: Understand and interpret standard reporting measures used to quantify cancer burden
- LO2: Comprehend and critically evaluate information presented in the cancer epidemiology literature
- LO3: Comprehend well-established genetic, biological, environmental, and behavioral causes of human cancer.
- LO4: Synthesize information from national cancer registries and the cancer epidemiology literature to support a cancer epidemiology research objective

Grading policies and due dates for tests, assignments, and attendance

Specific descriptions of the criteria and methods to be used in evaluating/grading student performance

Students will individually lead a presentation (30%) focusing on the descriptive epidemiology, biology, and pathogenesis of a single cancer site (more details to be given in class). 20% will be assigned based upon individual contribution to in-class discussions during lectures, journal clubs, and student presentations. Finally, students will write a paper (50%) due at the end of the semester based on a question/problem that interests them in cancer epidemiology related to prevention, risk, treatment, or survival (to be approved by instructor, more details to be given in class). This paper will be structured to give students practice writing in the style of a “Background/Significance” section of a grant application.

Grading Components

	Points	% of total grade
Student presentation	30	30%
Paper	50	50%
In-class participation	20	20%
Total	100	100%

Final Course Grade

Final Grade (%)	Letter Grade
95-100	A
90-94.99	A-
85-89.99	B+
80-84.99	B
75-79.99	B-
<75	other

Inclusion of [tentative] due dates for assignments, exams, and papers

Course Schedule

Week	Lecture Topic	Presentation	Reading	Lecturer
The Burden of Cancer				
1: 8/26	Cancer Incidence and Mortality Trends (cancer registries)		Henley, et al. 2020	Purrington/Gottschlich
2: 9/2	Migrant studies; Biomarkers		Jiagge, et al. 2016	Purrington/Gottschlich
Cancer Biology and Genetics				
3: 9/9	Cancer genetics and heritable cancers		Roberts, et al.2020	Purrington/Gottschlich
4: 9/16	Cancer screening			Guest: Kristin Maki, PhD

Causes of Human Cancer				
5: 9/23	Nutrition and Cancer	Student presentation		Guest: Cathy Bock, PhD
6: 9/30	Infection and cancer	Student presentation	TBD	Purrington/Gottschlich
7: 10/7	Obesity and cancer	Student presentation		Guest: Jennifer Beebe-Dimmer, PhD
8: 10/14	NO CLASS Fall Break			
9: 10/21	Hormonal exposures and cancer	Student presentation	TBD	Purrington/Gottschlich
10:10/28	Tobacco and cancer	Student presentation	TBD	Purrington/Gottschlich
10: 11/4	Radiation and cancer	Student presentation	TBD	Purrington/Gottschlich
12:11/11	Social epidemiology of cancer			Guest: Theresa Hastert, PhD
Primary and Secondary Prevention Strategies				
13:11/18	Cancer prevention-behavioral interventions			Guest: Lauren Hamel, PhD
14:11/25	Cancer survivorship		TBD	Purrington/Gottschlich
15:12/2	Cancer disparities		TBD	Purrington/Gottschlich

Online courses

- In case of school closures due to inclement weather, class will be held virtually via Zoom. Zoom links will be posted to the course Canvas site.

Class recordings

Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is to be used only for the student's personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why they cannot, such as



discussion of confidential or protected information. Violations of this syllabus policy may result in charges under the student code of conduct.

Religious holidays (from the online Academic Calendar)

Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

Land acknowledgement

Wayne State University rests on Waawiyaataanong (Waa-we-yaa-tih-nong), also referred to as Detroit, the ancestral and contemporary homeland of the Three Fires Confederacy. These sovereign lands were granted by the Ojibwe (Oh-jib-way), Odawa (Oh-daa-waa), Potawatomi (Pow-tuh-waa-tuh-mee), and Wyandot nations, in 1807, through the Treaty of Detroit. Wayne State University affirms Indigenous sovereignty and honors all tribes with a connection to Detroit. With our Native neighbors, WSU can advance educational equity and promote a better future for the earth and all people.

Student Disability Services

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services (SDS) for coordination of your academic accommodations. Please visit <https://studentdisability.wayne.edu> to register your condition. Once you have accommodations in place, please inform your instructor. Student Disability Services' mission is to assist the University in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at WSU. SDS supports students with a variety of conditions, such as mental health disorders, learning disabilities, chronic health conditions, etc.

Counseling and Psychological Services (CAPS)

It is quite common for college students to experience mental health challenges, such as stress, anxiety, and depression, that interfere with academic performance and negatively impact daily life. Help is available for any currently enrolled WSU student who is struggling with a mental health difficulty. Go to <https://caps.wayne.edu> for information on the services offered and how to access them. Other options, for students and non-students, include the [Mental Health and Wellness Clinic at the College of Education \(https://education.wayne.edu/mental-health-and-wellness-clinic\)](https://education.wayne.edu/mental-health-and-wellness-clinic). Services at all these clinics are free and confidential. Remember that getting help, before stress reaches a crisis point, is a smart and courageous thing to do – for yourself, and for those you care about. CAPS provides afterhours/weekend crisis support: students living on campus can call (313) 577-2277, and all others, call (313) 577-9982. In a life-threatening emergency, call the WSU Police at 313-577-2222.

Sexual Misconduct and Title IX

Most faculty and staff are considered “**Responsible Employees**” and are **required to report** information they receive about incidents of sexual misconduct (including sexual assault, stalking, dating/domestic violence, and sexual harassment) to the Title IX Coordinator when it involves a student.

Confidential support is available 24/7 through the [Rape, Abuse & Incest National Network \(RAINN\)](https://www.rainn.org/) (<https://www.rainn.org/>). Call **1-800-656-4673** or [Chat](https://hotline.rainn.org/online) (<https://hotline.rainn.org/online>) with a professional support specialist.

Options for Self-Reporting Sexual Misconduct

Any student impacted by sexual misconduct or sexual harassment has the right to report to the University (i.e., Responsible Employee or Title IX Coordinator), to law enforcement (i.e., WSUPD or other jurisdiction), to both, or to neither. Every Warrior is encouraged to make the reporting decision that is right for them.

Reporting to the University

The [Title IX Office](https://titleix.wayne.edu/) (<https://titleix.wayne.edu/>) is available to consult with individuals impacted by sexual violence or discrimination regarding resource referrals, supportive and protective measures, and reporting and resolution options. Where WSU has jurisdiction, the affected party may request an administrative investigation by the University.

Phone: 313-577-9999

Email: TitleIX@wayne.edu

Reporting to Law Enforcement

The [WSU Police Department](https://police.wayne.edu/) (<https://police.wayne.edu/>) is available 24/7 to assist individuals reporting criminal activity or concerns on or near campus. Report off-campus incidents to the appropriate police jurisdiction. In the event of an emergency or imminent threat, reporting to the police is highly encouraged.

Phone: 313-577-2222

Every Warrior has the right to live, learn, and work at WSU – free from Harassment or Discrimination. If you or someone you know has been impacted by sexual violence or discrimination, please visit [TitleIX.wayne.edu](https://titleix.wayne.edu) to learn more about resources and support on campus and in the community.

Food Pantry and Basic Needs

Wayne State has a food pantry, a free resource available for all students. See the hours on the website <https://thew.wayne.edu/pantry>.

Learning is always more challenging when you are struggling to meet basic needs. Wayne State recognizes that you may face a number of challenges during your time here, and we are here to support you. Any student who faces challenges securing food, housing, or medical care is

encouraged to contact relevant university offices noted on the [Financial Aid website \(https://wayne.edu/financial-aid/\)](https://wayne.edu/financial-aid/) for support. You are also encouraged to contact Care, Support, and Intervention services in the Dean of Students Office (DOSO) for assistance with connecting to resources for basic needs. Students can call DOSO at 313-577-1010 or submit a [care referral form \(https://doso.wayne.edu/conduct/student-support-intervention\)](https://doso.wayne.edu/conduct/student-support-intervention).

Academic Dishonesty – Plagiarism and Cheating

[Academic misconduct \(https://doso.wayne.edu/conduct/academic-misconduct\)](https://doso.wayne.edu/conduct/academic-misconduct) is any activity that tends to compromise the academic integrity of the institution or undermine the education process. Examples of academic misconduct include:

- **Plagiarism:** To take and use another's words or ideas as your own without appropriate referencing or citation.
- **Cheating:** Intentionally using or attempting to use or intentionally providing unauthorized materials, information, or assistance in any academic exercise. This includes copying from another student's test paper, allowing another student to copy from your test, using unauthorized material during an exam and submitting a term paper for a current class that has been submitted in a past class without appropriate permission.
- **Fabrication:** Intentional or unauthorized falsification or invention of any information or citation, such as knowingly attributing citations to the wrong source or listing a fake reference in the paper or bibliography.
- **Other:** Selling, buying, or stealing all or part of a test or term paper, unauthorized use of resources, enlisting in the assistance of a substitute when taking exams, destroying another's work, threatening, or exploiting students or instructors, or any other violation of course rules as contained in the course syllabus or other written information.

Such activity may result in failure of a specific assignment, an entire course, or, if flagrant, dismissal from Wayne State University.

Course drops and withdrawals

For courses running the full term, students can drop this class and receive 100% tuition and course fee cancellation for the first two weeks. After the end of the second week there is no tuition or fee cancellation. Students who wish to withdraw from the class can withdraw on [Academica \(https://academica.wayne.edu/\)](https://academica.wayne.edu/). You will receive a mark of W at the time of withdrawal. No withdrawals can be initiated after the deadline. Students enrolled beyond the deadline will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step, including speaking with your instructor or advisor. More information on course drops and withdrawals can be found on the [Registrar's website \(https://wayne.edu/registrar\)](https://wayne.edu/registrar). For classes that are shorter than the full term, deadlines for dropping and withdrawal can be found on the section's detail in the [Schedule of Classes \(https://registration.wayne.edu/\)](https://registration.wayne.edu/).

Student Services

The Academic Success Center

The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit the [Academic Success Center \(https://success.wayne.edu/\)](https://success.wayne.edu/) for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).

The Writing Center & Writer's Studio

The Writing Center provides a variety of tutoring options free of charge for graduate and undergraduate students at WSU. Tutoring sessions are available in the following modes:

- In-person during our Writer's Studio open hours (to learn more, please visit our website)
- Online, synchronous sessions (up to 50-minutes)
- Online, asynchronous sessions (please review our guidelines for asynchronous tutoring)

Tutoring services are provided by trained undergraduate and graduate student tutors. Our tutors assist with writing from all disciplines and on a range of topics including but not limited to: brainstorming, drafting, revising, organization, and editing. All tutoring sessions are collaborative, so please come prepared to work with your tutor (whether online or in-person). We look forward to working with you!

To schedule a one-on-one appointment, please visit our website: <https://writing.wayne.edu>

For in-person services or just a dedicated space to write and study, you're welcome to drop into our Writer's Studio any time during our regular business hours – no appointment necessary! You can find our current hours at our website: <https://writing.wayne.edu>

For more information about the Writing Center and Writer's Studio, please contact the Director, Amy Latawiec (email: amy.latawiec@wayne.edu)

Library research assistance

The University Libraries are available 24x7 to help students locate and access articles, books, and other credible and reliable resources you need for your research papers and projects. Librarians can also help you understand assignments and cite the articles and images that you use in your papers. You can connect with librarians at <https://library.wayne.edu/help> for chat, email, phone, drop-in hours, or appointments.