PUBH 6387, SECTION 001

Cancer Epidemiology
Spring/2019

COURSE & CONTACT INFORMATION

Credits:　　　　　2
Meeting Day(s): Tuesdays and Thursdays
Meeting Time:　10:10 am – 12:05 pm
Meeting Place:　Weaver-Densford Hall W2120

Instructor:　　　Heather Nelson, MPH, PhD
Email:　　　　　hhnelson@umn.edu
Office Phone:　6-9887
Office Hours:　After class, or by appointment
Office Location: MCRB 554E

COURSE DESCRIPTION

This is a survey course that will cover fundamentals in cancer epidemiology, as well as specialized topics and current issues in cancer epidemiology research. Students will be given the tools to critically read primary cancer epidemiology literature, as well locate and interpret information related to cancer incidence and mortality, carcinogenesis, risk factors, and cancer prevention and control.

COURSE PREREQUISITES

PubH 6320, 6330 or permission of the instructor

COURSE GOALS & OBJECTIVES

- An understanding of cancer epidemiology as a large field that includes: population burden, surveillance, etiology, prevention and control, screening, diagnosis, treatment, and survivorship.

- Knowledge of the general principles of the molecular and cellular basis of carcinogenesis

- Knowledge of cancer surveillance and cancer screening, and their relation to cancer prevention

- Critical evaluation of different methodological approaches used to study etiologic hypotheses in cancer research

- Knowledge of the major known and hypothesized associations between cancer and nutrition, hormones, reproduction, occupation, tobacco, alcohol, chemical exposures and radiation

METHODS OF INSTRUCTION AND WORK EXPECTATIONS

Teaching will include lectures, and group discussions (small and large) that involve student input. Case studies will be used extensively, as will critiques of the primary literature. There will be assigned readings, and these readings should be completed prior to class. Many class periods will include self-directed learning on a current topic in cancer epidemiology, followed by small group discussion in class. Students will turn in "talking points" that reflect their preparation for these group discussions, and these talking points will count towards the participation grade. In lieu of exams there will be a midterm group project, and a final culminating individual project that integrates the principles covered in the course.

In this course, students are expected to engage with each other in respectful and thoughtful ways.

In group work, this can mean:
- Setting expectations with your groups about communication and response time during the first week of the semester (or as soon as groups are assigned) and contacting the TA or instructor if scheduling problems cannot be overcome.
- Setting clear deadlines and holding yourself and each other accountable.
- Determining the roles group members need to fulfill to successfully complete the project on time.
- Developing a rapport prior to beginning the project (what prior experience are you bringing to the project, what are your strengths as they apply to the project, what do you like to work on?)

In group discussion, this can mean:
- Respecting the identities and experiences of your classmates.
- Avoid broad statements and generalizations. Group discussions are another form of academic communication and responses to instructor questions in a group discussion are evaluated. Apply the same rigor to crafting discussion posts as you would for a paper.
- Consider your tone and language, especially when communicating in text format, as the lack of other cues can lead to misinterpretation.

Like other work in the course, all student to student communication is covered by the Student Conduct Code (https://z.umn.edu/studentconduct).

COURSE TEXT & READINGS

Course Readings/Helpful links: Optional text: Fundamentals of Cancer Epidemiology by Nasca and Pastides, Second Edition; other selected readings on specific topics will be posted on the website throughout the semester.

Other sources for information. Additional reading material may be sought from textbooks such as Cancer Epidemiology and Prevention (Schottenfeld and Fraumeni); Human Cancer: Epidemiology and Environmental Causes (Higginson, Muir, Munoz); Cancer Epidemiology: Principles and Methods (dos Santos Silva) and Textbook of Cancer Epidemiology (Adami, Hunter, Tricholpoulos).

COURSE OUTLINE/WEEKLY SCHEDULE
Dates and topics of specific lectures may change. Readings for each module are posted in Canvas

Week	Module	Activities/Assignments
Week 1 Jan 22	• **Introduction and Overview** • **Descriptive Cancer Epidemiology**	• **About me survey**
Week 1 Jan 24	• **Cancer Registration** • **Cancer Clusters**	• **SIR homework** • **SEER graphs** • **Identify a cancer cluster**
Week 2 Jan 29	• **Seminal cancer epidemiology studies**	• **Mock manuscript review**
Week 2 Jan 31	• **Childhood Cancer (guest instructor Erin Marcotte)**	• **Talking points for group discussion**
Week 3 Feb 5	• **Cancer Biology** • **Immunity and Inflammation**	• **Manuscript review homework**
Week 3 Feb 7	• **What is a carcinogen**	• **Talking points for cancer controversy discussion**
Week 4 Feb 12	• **Cancer in MN (guest instructor Jen Poynter)**	• **Manuscript review homework**
Week 4 Feb 14	• **Genetics** • **Is cancer bad luck**	• **Talking points for "is cancer bad luck" discussion**
Week 5 Feb 19	• **Midterm project presentations** • **Cancer prevention lecture part 1**	• **Mideterm projects due**
Week 5 Feb 21	• **Midterm project presentations** • **Cancer prevention lecture part 2**	•
Week 6 Feb 26	• **Screening** • **Metastasis**	• **Overdiagnosis homework**
Week 6 Feb 28	• **Survivorship (guest instructor Patricia Jewett)**	• **Talking points for "what is a survivor"**

Week 7 March 5	• **Prostate cancer research to implementation (guest instructor Sarah Daughtery)** • **Course wrap up**	•
Week 7 March 7	• **Student Fact Sheet presentations**	• **Fact sheets due**

SPH AND UNIVERSITY POLICIES & RESOURCES

The School of Public Health maintains up-to-date information about resources available to students, as well as formal course policies, on our website at www.sph.umn.edu/student-policies/. Students are expected to read and understand all policy information available at this link and are encouraged to make use of the resources available.

The University of Minnesota has official policies, including but not limited to the following:
- Grade definitions
- Scholastic dishonesty
- Makeup work for legitimate absences
- Student conduct code
- Sexual harassment, sexual assault, stalking and relationship violence
- Equity, diversity, equal employment opportunity, and affirmative action
- Disability services
- Academic freedom and responsibility

Resources available for students include:
- Confidential mental health services
- Disability accommodations
- Housing and financial instability resources
- Technology help
- Academic support

EVALUATION & GRADING

Student performance requirements:
25% - Group project (midterm)
25% - Final project (student fact sheet)
20% - Homework and manuscript reviews
30% - Class participation (attendance, talking points, participation in small and large group discussion)

Grading Scale
The University uses plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following, and you can expect the grade lines to be drawn as follows:

% In Class	Grade	GPA
93 - 100%	A	4.000
90 - 92%	A-	3.667
87 - 89%	B+	3.333
83 - 86%	B	3.000
80 - 82%	B-	2.667
77 - 79%	C+	2.333
73 - 76%	C	2.000
70 - 72%	C-	1.667
67 - 69%	D+	1.333
63 - 66%	D	1.000
< 62%	F	

- A = achievement that is outstanding relative to the level necessary to meet course requirements.
- B = achievement that is significantly above the level necessary to meet course requirements.
- C = achievement that meets the course requirements in every respect.
- D = achievement that is worthy of credit even though it fails to meet fully the course requirements.
- F = failure because work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I (Incomplete).
- S = achievement that is satisfactory, which is equivalent to a C- or better
- N = achievement that is not satisfactory and signifies that the work was either 1) completed but at a level that is not worthy of credit, or 2) not completed and there was no agreement between the instructor and student that the student would receive an I (Incomplete).

Evaluation/Grading Policy	Evaluation/Grading Policy Description
Scholastic Dishonesty, Plagiarism, Cheating, etc.	You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis (As defined in the Student Conduct Code). For additional information, please see https://z.umn.edu/dishonesty The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: https://z.umn.edu/integrity. If you have additional questions, please clarify with your instructor. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam. Indiana University offers a clear description of plagiarism and an online quiz to check your understanding (http://z.umn.edu/iuplagiarism).
Late Assignments	Late assignments, if arranged prior to the due date, will receive partial credit.
Attendance Requirements	Attendance required please contact the instructor regarding absences
Extra Credit	NA