

JUL 23 2008

New Course Request

Indiana University

Indy Campus

Check Appropriate Boxes: Undergraduate credit [] Graduate credit [X] Professional credit [] 87

1. School/Division Medicine/Public Health 2. Academic Subject Code PBHL
3. Course Number P505 (must be cleared with University Enrollment Services) 4. Instructor Swanson
5. Course Title Cancer Epidemiology
Recommended Abbreviation (Optional) Cancer Epidemiology
6. First time this course is to be offered (Semester/Year): Fall / 2008
7. Credit Hours: Fixed at 3 or Variable from - to -
8. Is this course to be graded S-F (only)? Yes No [X]
9. Is variable title approval being requested? Yes No [X]
10. Course description (not to exceed 50 words) for Bulletin publication: This course is an overview of cancer epidemiology, focusing on key concepts, etiologic research, applications to public health practice and major methodologies.

11. Lecture Contact Hours: Fixed at 3 or Variable from - to -
12. Non-Lecture Contact Hours: Fixed at - or Variable from - to -
13. Estimated enrollment: 30 of which 100 percent are expected to be graduate students.
14. Frequency of scheduling: F, S, Sum Will this course be required for majors? Yes
15. Justification for new course: This new course is needed to reflect the history and current information on the epidemiology of cancer.
16. Are the necessary reading materials currently available in the appropriate library? Yes
17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.
18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.
19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by:

Approved by:

Gregory Wiskum Date 1/30/08
Department/Chairman/Division Director

Bob B. Legum Date 2/18/08
Dean

Date 7/24/08
Dean of Graduate School (when required)

Merry H. Quencer Date 7/18/08
Chancellor/Vice-President

APPROVED APR 22 2008
Curriculum Subcommittee Date

University Enrollment Services Date

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

UPS 724

**Indiana University
IUPUI Campus
School of Medicine
Department of Public Health**

SYLLABUS

**Cancer Epidemiology
Fall Semester, 2008**

Course Overview and Summary

Time: TBA

Location: TBA

Instructor: G. Marie Swanson, Professor and Associate Chair, Department of Public Health, IU School of Medicine, Suite EF250 714 N Senate, Indianapolis IN 46202, swanson3@iupui.edu; 278-0754.

Office Hours: One hour before class and by appointment

Course Description: Cancer Epidemiology. This course is an overview of cancer epidemiology, focusing on key concepts, etiologic research, applications to public health practice and major methodologies.

Course Prerequisite: H517 Fundamentals of Epidemiology

Course Learning Objectives: Upon completion of this course, students should be able to identify and apply the following to epidemiologic research and public health practice:

- 1—basic concepts of Cancer Epidemiology
- 2—basic methods of Cancer Epidemiology
- 3—host factors, infectious agents, carcinogenesis
- 4—basic approaches to cancer control and prevention
- 5—internet-based cancer epidemiologic materials for surveillance, control, prevention, and policy

and to:

- 6—develop appropriate epidemiologic research hypotheses and study designs as well as population-based cancer prevention, screening, and control interventions.

Course Materials and Notes: The Course materials and notes are found online at Oncourse. Materials include: syllabus, readings, concepts and methods, and homework assignments. In addition, lecture powerpoint notes and other materials will be provided online at Oncourse just after each session.

Required Texts: TBA

Course Requirements: Homework Assignments, class presentations, one paper and a final exam. See Homework Sheet.

Grading/Student Evaluation: Grades will be based on points for each component of the course requirements. Each homework assignment will be valued at 10 points, each class presentation at 20 points, class attendance and general class participation at 40 points, the paper at 40 points and the final exam at 50 points.

Class Attendance/Participation: Class attendance and participation is required. There will be a sign-in sheet for each class. Students must participate in both formal and informal discussion during each class session.

It is expected that you will have thoroughly read all of the assigned material for the week, and be prepared to speak on any of the topics covered in the reading. You will be graded not simply for participating in class discussion, but on your meaningful contributions to the discourse.

Evaluation and Grading

Homework assignments	80 points
Class presentations	40 points
In-class activities and class participation	40 points
Course project written report	40 points
Final Exam	50 points
Total	250 points

The grading scale is as follows:

Points	Letter
220-250	A
190-219	B
189-218	C
217 or less	F

All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion. Absences pre-approved by the IUPUI Dean of Students (or Dean's designee) will be honored.

Course Schedule

Session 1

Detailed overview of course and course requirements, including the approach to the course overall and to each session. Organization of class, introduction of students, Introduction to Cancer Epidemiology, Cancer Biology and Carcinogenesis, and Biomarkers and Molecular Epidemiology.

Readings: Ruddon, R. *Cancer Biology*, 4th Edition, March, 2007, Oxford University Press., selected chapters.

Session 2

Descriptive Cancer Epidemiology: Overview and Sources of Data. Comparison of NCI SEER Program and CDC State Cancer Registries.

Websites for this session: www.cdc.gov/cancer/npcr and www.cancer.gov/statistics

Session 3

Cancer Prevention

Primary prevention
Chemoprevention

Cancer and Chronic Disease Co-morbidity

Prevalence of Chronic Disease Co-morbidity
Aging and Chronic Disease Co-morbidity

Readings: There will be 2-4 current journal articles assigned for this session. The articles and references can be found online in the Homework Table.

Session 4

Screening for early detection of cancer

Principles and practices
Public health guidelines
Culturally appropriate interventions
Ethical issues
Design of screening interventions in
public health practice settings

Session 5

Colon Cancer Overview

- Colon cancer
- Colorectal polyps
- Selected risk factors
- Descriptive epidemiology
- Screening

Lung Cancer Overview

- Lung cancer
- Prevention
- Other selected risk factors
- Descriptive epidemiology
- *Genetic epidemiology*

Readings: Selected chapters from Human Cancer: Epidemiology and Environmental Causes. Cambridge University Press, November, 2005. Current journal articles on these topics also will be assigned—see Homework table online.

Session 6

Class Presentations: Preliminary research questions, specific aims, hypotheses, and background for research proposal (course paper).

Session 7

Breast Cancer Overview

- ***Breast Cancer***
- ***Male breast cancer***
- ***Selected Risk factors***
- ***Descriptive epidemiology***
- ***International trends***
- ***Screening***
- ***Genetic epidemiology and Genetic testing***
- ***Prevention***

Overview of other female cancers: Ovary, cervix, uterus

- Descriptive epidemiology
- Screening
- Selected risk factors
- Genetic epidemiology and genetic testing
- Prevention

Readings: Selected chapters from *Human Cancer: Epidemiology and Environmental Causes*. Cambridge University Press, November, 2005. Current journal articles on these topics also will be assigned—see Homework table online.

Session 8

Ethical Issues and Key Methodologies for Cancer Epidemiology Research and Cancer Prevention and Control Interventions

- Social justice
- To pay or not to pay
- Recruitment of participants and communities
- Measurement and definitions
- Genetics and ethics
- Questionnaires vs biomarkers

Readings: Selected articles from recent scientific publications will be utilized to demonstrate each concept and methodology

Session 9

Prostate Cancer Overview

- Prostate Cancer
- Selected risk factors
- Descriptive epidemiology
- Screening
- Prevention

Testicular Cancer

- Descriptive epidemiology
- Screening
- Selected risk factors

Readings: Selected chapters from *Human Cancer: Epidemiology and Environmental Causes*. Cambridge University Press, November, 2005. Current journal articles on these topics also will be assigned—see Homework table online.

Session 10

Occupational and Environmental Cancer Risks

**Basic concepts
Methodologies common to these studies**

Readings: There will be 2-4 current journal articles assigned for this session. The articles and references can be found online in the Homework Table.

Session 11

Second Set of Presentations—Each student will present a concept for a cancer prevention or screening intervention AND a timely issue for public health policy in the form of a media “soundbite”.

Session 12

Genetics and Family History in Cancer Epidemiology

Readings: There will be 2-4 current journal articles assigned for this session. The articles and references can be found online in the Homework Table.

Session 13

Diet and Cancer

**Obesity
Dietary Fat
Fruits, vegetables, and fiber
Alcohol**

Session 14

Childhood Cancers

**Descriptive epidemiology
Leukemias
Long-term survivorship
Quality of life**

Readings: There will be 2-4 current journal articles assigned for this session. The articles and references can be found online in the Homework Table.

Session 15

Student Presentations—Group 1

Session 16

Student Presentations—Group 2

Academic Integrity: Students are expected to be familiar with the IUPUI Student Code of Conduct found at <http://www.iupui.edu/code> and to abide by all of Part II, Student Responsibilities.

Classroom Behavior: There will be no cell phone use, no activity other than the classroom lectures, assignments, discussions; no reading of any material not assigned for in-class reading for the session, no internet browsing, etc. All classroom behavior will be professional and respectful of all others in the classroom.

Grievance Policy: The IUPUI Grievance policy is followed in this course. For more information: http://life.iupui.edu/help/docs/Part_2all.html

Disability Accommodation: Students who are registered with the Disability Resource Center must submit appropriate documentation to the instructor if they are requesting reasonable accommodations:
The Office of Adaptive Educational Services actively works to make campus life and learning accessible for students with disabilities. Sign language, interpreters, note takers, readers, exam proctors, and classroom accommodations are services offered by Adaptive Educational Services.
From more information call 274-3241. (TDD available)
Visit: <http://life.iupui.edu/aes/>

Syllabus Changes: Information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed necessary and appropriate by Professor Swanson.