

APPLICATION FOR NEW COURSE

1. Submitted by the College of Public Health Date: 6/12/08

Department/Division proposing course: Epidemiology

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number EPI 716

b. Title* Infectious Disease Epidemiology

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

() CLINICAL () COLLOQUITUM () DISCUSSION () LABORATORY () LECTURE
() INDEPEND. STUDY () PRACTICUM () RECITATION () RESEARCH () RESIDENCY
() SEMINAR () STUDIO () OTHER – Please explain: _____

d. Please choose a grading system: Letter (A, B, C, etc.) Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES NO If YES, maximum number of credit hours: _____

g. Course description:

This course provides instruction about the epidemiological and microbiological characteristics of bacteria, fungi, prions, rickettsia and viruses causing emerging and infectious diseases.

h. Prerequisite(s), if any:

Graduate student or consent of instructor

i. Will this course be offered through Distance Learning? YES NO

If YES, please circle one of the methods below that reflects how the majority of the course content will be delivered:

Internet/Web-based Interactive video Extended campus Kentucky Educational Television (KET/teleweb) Other

Please describe "Other": _____

3. Teaching method: N/A or Community-Based Experience Service Learning Component Both

4. To be cross-listed as: _____ _____
Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2009

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6. Course to be offered (please check all that apply): Fall Spring Summer
7. Will the course be offered every year? YES NO
If NO, please explain: _____
8. Why is this course needed?
This is a required course in the new PhD program in Epidemiology and Biostatistics.

9. a. By whom will the course be taught? Glyn Caldwell
- b. Are facilities for teaching the course now available? YES NO
If NO, what plans have been made for providing them?

10. What yearly enrollment may be reasonably anticipated?
15-20
11. a. Will this course serve students primarily within the department? Yes No
- b. Will it be of interest to a significant number of students outside the department? YES NO
If YES, please explain.
It will be of interest to Biostatistics students as well as Epidemiology students.
12. Will the course serve as a University Studies Program course[†]? YES NO
If YES, under what Area? _____
[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.
13. Check the category most applicable to this course:
- traditional – offered in corresponding departments at universities elsewhere
- relatively new – now being widely established
- not yet to be found in many (or any) other universities
14. Is this course applicable to the requirements for at least one degree or certificate at UK? Yes No
15. Is this course part of a proposed new program? YES NO
If YES, please name: PhD in Epidemiology and Biostatistics
16. Will adding this course change the degree requirements for ANY program on campus? YES NO
If YES[†], list below the programs that will require this course:

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‡In order to change the program(s), a program change form(s) must also be submitted.

17. The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.
18. Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See SR 3.1.4)
19. Within the department, who should be contacted for further information about the proposed new course?

Name: Glyn Caldwell Phone: 502-695-1149 Email: gcald2@uky.edu

20. Signatures to report approvals:

4-1-08	Glyn G. Caldwell <i>Glyn G. Caldwell</i>
DATE of Approval by Department Faculty	printed name Reported by Department Chair signature

6-26-08	Linda Alexander <i>Linda Alexander</i>
DATE of Approval by College Faculty	printed name Reported by College Dean signature

*	/
DATE of Approval by Undergraduate Council	printed name Reported by Undergraduate Council Chair signature

*	/
DATE of Approval by Graduate Council	printed name Reported by Graduate Council Chair signature

8/19/08	Heidi Anderson <i>Heidi Anderson</i>
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name Reported by Health Care Colleges Council Chair signature

*	/
DATE of Approval by Senate Council	Reported by Office of the Senate Council

*	/
DATE of Approval by University Senate	Reported by Office of the Senate Council

*If applicable, as provided by the *University Senate Rules*. (<http://www.uky.edu/USC/New/RulesandRegulationsMain.htm>)

EPI 716
INFECTIOUS DISEASES EPIDEMIOLOGY
Spring 2009

Time: Monday 3:00 pm 5:30 pm
Place: School of Nursing 214
Course Instructor: Glyn G. Caldwell, MD
502-695-1149
glyncaldwell@dcr.net
Office Hours Monday 1:00 pm to 2:45 pm in CPH 213 or by appointment

COURSE DESCRIPTION

This course will focus on the epidemiology, history, methods, and ancillary laboratory tools used in the study and control of infectious diseases and distinctive problems associated with each class of infectious agents. Discussions of theory and key concepts, epidemiological investigations and basic study designs will be included. The course will discuss how epidemiological methods can be applied to the study, investigation, prevention, and control of infectious diseases and emerging infectious diseases.

COURSE GOAL

The course goal is to produce an epidemiologist and public health practitioner with the knowledge and skills to teach, investigate, study, prevent, and control infectious and emerging diseases in both the academic and public health setting.

COURSE OBJECTIVES

This course will outline the history, epidemiological concepts, microbiological methods, and ancillary laboratory tools used in the study and control of infectious diseases in human populations. The course includes discussions of theory and methods, including key concepts of incidence, prevalence, mortality, transmission, reservoir, life cycle, prevention and control of infectious diseases. The course will define and outline the basic types of epidemiological investigations and distinctive features/problems associated with each.

Students will, upon examination, be able to describe and discuss the following:

- I. Principles of Infectious Disease Epidemiology
 1. Differentiate between a clinical and an epidemiological approach to the study and control of infectious diseases.
 2. Describe the historical evolution of infectious diseases epidemiology.
 3. Identify the contributions of microbiology and epidemiology as they relate to the prevention and control of infectious diseases.
 4. Understand and be able to apply the correct methods to investigate a suspected infectious disease outbreak/epidemic.

5. Describe the concepts and interactions of agent, host, environment, vector, incubation time, transmission, life cycle (where appropriate) and reservoir.
 6. Understand and be able to apply the concepts, methods, and appropriate study designs to the study of emerging infectious diseases and their potential etiologic agent(s).
 7. Describe and understand the evolution and epidemiology of emerging and re-emerging infectious diseases.
- II. Principles of Infectious Disease Control and Prevention
1. Describe history of infectious diseases prevention and control.
 2. Describe the diagnostic methods appropriate to infectious and emerging diseases.
 3. Describe the various methods of prevention and control of communicable and emerging diseases.
 4. Describe how physicians use epidemiological methods in their practice.

RELATIONSHIP TO COLLEGE OF PUBLIC HEALTH TERMINAL OBJECTIVES

This course relates directly to the accomplishment of the educational program goals for the joint PhD degree in Epidemiology and Biostatistics. The goals and objectives are described in the Student Handbook which students received upon enrollment into the program. Please reference the appropriate educational program goals throughout the semester, as they will provide a framework for this course and as such will contribute to your preparation for successfully completing other degree program requirements (e.g. comprehensive examination and dissertation).

Relationship of This Course To the Epidemiology Concentration Area Terminal Objectives

In relationship to the PhD degree, this course contributes toward fulfillment of the following terminal objectives for students in the combine epidemiology and biostatistics program.

1. Explain and apply the principles and methods of epidemiology as they apply to infectious and emerging diseases in a wide variety of clinical, community, environmental and public health situations.
2. Search, critically review, and synthesize and interpret the infectious and emerging diseases epidemiologic and public health and infectious disease literature to impact public health policy.
3. Identify and use appropriate epidemiologic and microbiological study designs for study of infectious and emerging diseases.
4. Collect and manage data for the investigation of infectious and emerging disease outbreaks.
5. Interpret and clearly communicate complicated epidemiological and infectious disease data and findings to collaborators, legislators, administrators, and the public to effect modification of public health

- policy.
6. Effectively lead, educate, and mentor students, coalitions, clinicians, legislators, administrators, public health practitioners, and other persons to utilize infectious and emerging disease data, methods, and findings to impact public health and public health practice.
 7. Prepare and present a portion of an infectious disease epidemiology course.

COURSE REQUIREMENTS

1. Two examinations 25 percent (each examination)
2. Four brief papers 10 percent (each paper)
3. Prepare and present one lecture complete 10 percent
with an outline, bibliography and an appropriate power point presentation
4. Each student is expected to prepare an outline and a bibliography of each assigned infectious disease epidemiology topic (10 percent of grade for each). Topics will be assigned individually depending on class size to review the literature, prepare an outline, and a bibliography about the assigned topic. In the outline, the student should look specifically for both the infecting microorganism's and resulting disease characteristics, epidemiological concepts, methods, issues, and problems that remain unresolved and in need of further research. The bibliography and outline should comply with the format provided and should cover at least: 1) the history of discovery of the disease and etiologic agent, 2) the incidence, prevalence, case fatality and mortality rates, demographics and distribution among local, state, national, and worldwide populations, 3) transmission, reservoir, incubation and communicable periods, 4) preventive and control methods, 5) potential for use as a weapon of mass destruction, and 6) potential for epidemic occurrence.
4. Examinations will cover both the lecture material, and readings from the texts. Any student who misses a class session is responsible for obtaining notes or other handout materials from a fellow classmate. No make-up examinations will be given unless arrangements are made with the instructor in advance of the scheduled examination. Any student who fails to take a scheduled examination will receive a zero ("0") for that examination. This same policy will be applied to exercises and projects.

GRADING SCALE

Grade	%
A	90-100
B	80-89
C	70-79
E	60-69

COURSE TEXTS

Required:

Nelson, KE, CM Masters, and NMH Graham. Infectious Disease Epidemiology Theory and Practice. Aspen Publishers Incorporated, Gaithersburg, Maryland, 2007.

Alternate: Nelson, KE, CM Masters, and NMH Graham. Infectious Disease Epidemiology Theory and Practice. Aspen Publishers Incorporated, Gaithersburg, Maryland, 2000.

Useful, but not mandatory:

Chin, James, Editor. Control of Communicable Diseases Manual, 18th Edition. American Public Health Association, Washington, D. C. 2000.

ACADEMIC DISHONESTY

Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably prepared, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from a grade of "F" to expulsion from the University. Both cheating and plagiarism are considered academic dishonesty. Cheating refers to any unauthorized assistance during examinations, such as notes or handouts. It also includes either giving or taking the answers to examination questions to/from other student(s). Consequently, the use of cell phones (with or without an internal camera) during examinations, without explicit permission will result in a charge of cheating. Plagiarism is academic "theft", and includes not properly crediting another author for his/her work or idea. Any paraphrase or direct quotation from a published or unpublished work should be properly cited with a footnote or reference. Students must be particularly careful not to engage in plagiarism, even inadvertently, since computers and Internet web browsing seem to facilitate this process.

ENABLING ACCOMODATIONS

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the disability Resource Center (www.uky.edu/TLC/grants/uk_ed/services.drc.html). If you have not already done so, please register with the Disability Resource Center (Room 2 Alumni Gym 859-257-2754, jkarnes@uky.edu) for coordination of campus disability services available to students with disabilities.

Tentative draft COURSE SCHEDULE Tentative draft

Class	Date	Topic	Reading Assignment
1	1/12/09	Introduction and History of Infectious Disease Epidemiology	NWG: Chapter 1,2,12
2	1/26/09	Epidemiologic Concepts of Infectious Disease, Surveillance, Outbreak Investigation, and Geographic Information Systems	NWG: Chapters 2,4,5,7
3	2/2/09	Epidemiologic Tools: Microbiology, Modeling, Molecular Biology, and Study Design	NWG: Chapters 3, 6-8
4	2/9/09	Infectious Disease Prevention	NWG: Chaps 9-
11			
5	2/16/09	Airborne Transmission—Tuberculosis, Influenza, and Other Respiratory Diseases	NWG: Chaps. 15-19
6	2/23/09	Foodborne and Diarrheal Diseases	NWG: Chapter
20			
7	3/2/09	MID-TERM EXAMINATION	
	3/9/09	SPRING BREAK—ACADEMIC HOLIDAY	
8	3/16/09	Blood-borne Pathogens: Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome	NWG: Chapter
21			
9	3/23/09	Sexually Transmitted Diseases	NWG: Chapter
23			
10	3/30/09	Viral Hepatitis and Liver Cancer	NWG: Chapter
22			
11	4/6/09	Vector-borne Diseases	NWG: Chaps 24-
26			
13	4/16/09	Nosocomial Infections	NWG: Chaps 14
14	4/23/09	Emerging and Re-emerging Infectious Diseases	NWG: Chapter
13, 24			
15	4/30/09	FINAL EXAMINATION	