UNIVERSITY OF KENTUCKY
APPLICATION FOR NEW COURSE

1. Submitted by College of Medicine ___________________________ Date September 25, 2001
   Department/Division offering course School of Public Health ___________________________

2. Proposed designation and Bulletin description of this course
   a. Prefix and Number SPH 712
   b. Title* Advanced Epidemiology and Research Methods
      *NOTE: If the title is longer than 24 characters (including spaces), write
      A sensible title (not exceeding 24 characters) for use on transcripts Adv Epi and Res Methods
   c. Lecture/Discussion hours per week 2
   d. Laboratory hours per week 2
   e. Studio hours per week 0
   f. Credits 3
   g. Course description
      Introduction to specialized epidemiologic content areas as well as methods designed to meet the research and practice of
      health professionals.
   h. Prerequisites (if any)
      Enrollment in a Public Health degree program and SPH 605/PM 621 or consent of instructor
   i. May be repeated to a maximum of ___________________________ (if applicable)

4. To be cross-listed as
   ___________________________ Prefix and Number ___________________________ Signature, Chairman, cross-listing department

5. Effective Date Fall 2003 (semester and year)

6. Course to be offered
   ☐ Fall   ☒ Spring   ☐ Summer

7. Will the course be offered each year?
   ☒ Yes   ☐ No
   (Explain if not annually)

8. Why is this course needed?
   The course fulfills a concentration requirement in the Public Health curriculum.

9. a. By whom will the course be taught? Glyn Caldwell, M.D.
   b. Are facilities for teaching the course now available?
      If not, what plans have been made for providing them?
      ☒ Yes   ☐ No
10. What enrollment may be reasonably anticipated?  25

11. Will this course serve students in the Department primarily?  
   ☒ Yes  ☐ No 
   Will it be of service to a significant number of students outside the Department?  
   ☐ Yes  ☒ No 
   If so, explain.

Will the course serve as a University Studies Program course?  
   ☐ Yes  ☒ No 
   If yes, under what Area?

12. Check the category most applicable to this course
   ☒ traditional; offered in corresponding departments elsewhere;
   ☐ relatively new, now being widely established
   ☐ not yet to be found in many (or any) other universities

13. Is this course part of a proposed new program?  
   If yes, which?  

14. Will adding this course change the degree requirements in one or more programs?*  
   If yes, explain the change(s) below  
   ☐ Yes  ☒ No

15. Attach a list of the major teaching objectives of the proposed course and outline and/or reference list to be used.

16. If the course is a 100-200 level course, please submit evidence (e.g., correspondence) that the Community College System has been consulted.

17. Within the Department, who should be contacted for further information about the proposed course?
   Name  Joel Lee, Dr.P.H.  Phone Extension  323-5059 x285

*NOTE: Approval of this course will constitute approval of the program change unless other program modifications are proposed.
<table>
<thead>
<tr>
<th>Signatures of Approval:</th>
<th>Date</th>
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<tbody>
<tr>
<td>Department Chair</td>
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<td>Date of Notice to the Faculty</td>
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<td>*Undergraduate Council</td>
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<td>*University Studies</td>
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<td>*Graduate Council</td>
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<td>*Academic Council for the Medical Center</td>
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<tr>
<td>*Senate Council (Chair)</td>
<td>Date of Notice to University Senate</td>
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*If applicable, as provided by the Rules of the University Senate

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<th>ACTION OTHER THAN APPROVAL</th>
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Rev 11/98
Title: Topics in Advanced Epidemiology: Lecture and Laboratory

Number: SPH 712

Credit Hours: 3 Semester Hours. The course will meet for one 2 hour lecture and one 2 hour lab each week.

Prerequisites: PM 621 (Introduction to Epidemiology) or permission of the instructor

Time: 10:00 am – 11:50 am Wednesday (Lecture)
10:00 am – 11:00 am Friday (Lab/Discussion)
Department of Preventive Medicine and Environmental Health
2nd floor conference room, 1141 Red Mile Road

Faculty: Glyn Caldwell, M.D.

Course Description: This course provides the student with an introduction to specialized epidemiologic content areas as well as methods designed to meet the research and practice needs of health professionals. A series of topic driven lectures, discussions, applied problem sets and case studies will focus on the application of epidemiologic principles used in disease research and intervention studies. This course is taught with a corresponding laboratory/discussion section each week that emphasizes the content of the course with applied applications using the microcomputer or small group discussions. The course will be conducted in the “seminar style” with the discussion of each topic area encouraged. Problem sets will require the use of statistical and epidemiologic software for the microcomputer. Readings from current journals in the field of epidemiology and public health will be assigned.

Required texts:


Evaluation criteria:

<table>
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<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Class participation and preparation</td>
<td>15%</td>
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<tr>
<td>Problem sets (4)</td>
<td>50%</td>
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<tr>
<td>Final take-home examination</td>
<td>35%</td>
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100%

Course grading will be based upon the criteria stated in the University Bulletin.

Problem sets:

Four written problem sets will be distributed during the course to be worked in conjunction with the laboratory based section of the class. The problem sets will require the use of the microcomputer and the analysis of existing public health data or the use of Internet data resources and will address the following topics:

1) Analysis of surveillance data
2) Analysis of case control study data
3) Analysis of longitudinal / cohort data
4) Investigation of disease outbreaks

Final take-home examination

The students will be given a final take-home examination and will be given two weeks to complete the exercise. The take home examination will require the students to analyze a secondary dataset from a case control study using standard case-control methods (Mantel Haenszel stratified data analysis) techniques and to answer questions and perform calculations regarding the investigation of an outbreak.
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<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Class Section</th>
<th>Laboratory Session</th>
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<tbody>
<tr>
<td>JAN</td>
<td>X</td>
<td>Orientation (Browning)</td>
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<td>X</td>
<td>Questionnaire Design (Reed)</td>
<td>Questionnaire design and critique</td>
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<td></td>
<td>X</td>
<td>Basic Psychometrics (Browning)</td>
<td>Data entry/data coding/data analysis of scaled instruments</td>
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<td>X</td>
<td>Data Management Issues (Browning/Westneat)</td>
<td>Data file management techniques: file, translation, cleaning</td>
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<tr>
<td>FEB</td>
<td>X</td>
<td>Analysis of public health surveillance data (Browning)</td>
<td>Epi-Info analysis of BRFFS data (Graded Exercise 1)</td>
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<td></td>
<td>X</td>
<td>Rural demography and use of Census data (TBA)</td>
<td>Introduction to Internet public access data resources</td>
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<td>X</td>
<td>Basic principles of survey sampling I: sampling techniques (Kryscio)</td>
<td>Random, stratified and systematic samples: Computer exercise</td>
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<td>X</td>
<td>Basic principles of survey sampling II: sampling size calculations (Browning)</td>
<td>Calculation of sample sizes for cross-sectional and case/ control studies (Graded Exercise 2)</td>
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<tr>
<td>MARCH</td>
<td>X</td>
<td>Case Control study analysis I (Browning)</td>
<td>Case study: Diesel exhaust and lung cancer (Graded Exercise 3)</td>
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<tr>
<td></td>
<td>X</td>
<td>Case Control study analysis II (Browning)</td>
<td>Do-Epi exercise: Oral contraceptives and cancer risk</td>
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<td></td>
<td>X</td>
<td>Cohort research methods I</td>
<td>Conducting focus groups</td>
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<td>X</td>
<td>Cohort research methods II</td>
<td>Software for qualitative data analysis demonstration</td>
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<tr>
<td>APRIL</td>
<td>X</td>
<td>Outbreak investigations I (Browning)</td>
<td>Investigation of hepatitis outbreak (Graded Exercise 4)</td>
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<tr>
<td></td>
<td>X</td>
<td>Outbreak investigations II (Browning)</td>
<td>Computer simulation: Pharyngitis in Louisiana (CDC case study)</td>
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<td>X</td>
<td>Final Examination Discussion</td>
<td>Final take home exam</td>
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