APPLICATION FOR NEW COURSE

1. Subject: Public Health
   Department/Division offering course: Health Behavior

2. Pre-requisite designation and Bulletin description of this course:
   a. Course/Number: CPH 660
   b. Title: GIS Systems & Public Health
   c. Lecture/Discussion hours per week: 3
   d. Lab hours per week: 0
   e. Credits: 3

3. Course description:
   This course will introduce students to the ArcView Computer Information System (GIS) to map and spatially analyze public health data.

4. Term and used as:
   Prefix and Number

5. Effective date: Summer 2006

6. Course time offered:
   ☐ Fall  ☐ Spring  ☑ Summer

7. Will course be offered each year?
   (Ex. Offered annually)

8. What course needed?

   This course introduces the basic concepts and applications of the Geographic Information System (GIS) used in public health settings. It involves application of GIS in the health sciences and health systems. This course provides students with an understanding of GIS data, cartographic representation of data, and understanding some commonly used attributes of GIS. The course is required for students interested in public health systems and processes that create health patterns. The course is taught by Dr. Jeff Jones and Dr. Smith.

   Subjects include marketing, demography, epidemiology, and GIS applications in public health. This course is cross-listed with the GIS and Public Health Systems courses in the curriculum.

9. a. Will the course be taught this year?
   ☑ Yes  ☐ No

   b. What facilities for teaching the course now available?
   ☑ Yes  ☐ No

   c. What plans have been made for providing them?
APPLICATION FOR NEW COURSE

10. Would the content be reasonably and suitably 10
    offered? x Yes □ No

11. Would the course serve students in the Department primarily? x Yes □ No
    Would the course serve to a significant number of students outside the Department? □ Yes x No

12. Category most applicable to this course:
    General; offered in corresponding departments elsewhere
    Relatively new, now being widely established
    Not yet to be found in many (or any) other universities

13. Is the course applicable to the requirements for at least one certificate at the University of Kentucky? □ Yes x No

14. Is the course part of a proposed new program? □ Yes x No

15. Would the course change the degree requirements in one or more programs?* □ Yes x No

16. A statement of the major teaching objectives of the proposed course and outline and/or reference list to be used.

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

18. Who in the Department, who should be contacted for further information about the proposed course?

Name: Jeff Jones
Phone: 257-5678

*NOTE: Full approval of the course will constitute approval of the proposed course. Additional approval of other program modifications is not
necessary.
APPLICATION FOR NEW COURSE

CPH Faculty Council

10-5-05
Date

Dean of the College

2-27-06
Date

Date of Notice to the Faculty

3-22-06
Date

Date of Notice to University Senate

ACTION OTHER THAN

/AL

Rev 8/0
University of Kentucky
Instructor: Jeff Jones, Ph.D.
Office: UK College of Public Health
121 Washington Avenue, Suite 109B
Lexington, KY 40536-0003

Office Hours: Please call to set up an appointment
Phone: 257-5678 x82087
Email: Jeff.Jones@uky.edu

SPH 778-020: Special Topics in Public Health
Geographic Information Systems and Public Health

Required Texts:
ISBN: 1879102897

Course Description:
This course will introduce students to the ArcView Geographic Information System (GIS) to map and spatially analyze public health data. While GIS has numerous applications for many disciplines, this course will specifically focus on its use in public health. Beyond use of GIS for epidemiology, this course will also examine issues and methods of analyzing processes relating health patterns. The versatility of GIS in a public health setting will be examined and will include exercises looking GIS applications involving health, epidemiology, and health care systems. Public health work has been invited to the class to discuss their work and experiences. Students will be expected to complete a research project involving GIS, to supplement their capstone. Other issues of manipulation of data, sources of data, and understanding some common used public health datasets such as the YRBS, BRFSS, etc. The course will also provide an introduction to HTML coding to create simple websites for publishing public health information and maps on the internet.

Course Specific Objectives:
- Explain the role of behavioral and social science in public health. Specifically, explore the role of public health workforce, early childhood issues, and the gender, race, and social determinants of health.
- Understand the role of GIS in public health. This class explores how the utilization of health promotion and contribution to the public health system is available to the public health system.
- Explain how GIS as a tool can be used within policy, education, and health behavior.
Apply GIS to ecological modeling of health via tools for:

**Hands-On Workshops:** computer laboratory, discussion, and computer laboratory

**Course Requirements:**
- 5 exercises (100 points total, 20 points each)
- Research Project
  - Atlas (60 points)
  - Presentation (20 points)
  - Website (20 points)

**Attendance Policy:**
Students are required to attend every class meeting. Late documentation by physician or university official is not accepted. Examinations may be given in extreme circumstances at the discretion of the instructor. Attendance will not be formally taken. Grades will be calculated highly with attendance.

**Academic Honesty:** The Department of Health Behavior, University of Kentucky, place a premium on academic honesty. All students are expected to hold themselves to the highest standards of academic integrity. Please refer to the University of Kentucky Code of Student Rights and Responsibilities (http://www.uky.edu/StudentAffairs/Code/part2.html).

**Grading Policy:** I reserve the right to modify the grading criteria or assignment of grades, in which case I will document said changes in this document.

**Grades:**
- 90-100 = A
- 80-89 = B
- 70-79 = C

Grades are cumulative based on a total point system.

**Outline:**
- Introduction
- Basics of Cartography
- Geographic/Spatial Analysis vs. Cartography
- Limits of Data
- GIS Terminology
- Exercise 1: Cognitive Mapping due
- Cognitive Mapping, Analysis, and Health Behavior, and Health Promotion
- Common Sources of Data
- Understanding These Datasets
- Costs of Setting Up a GIS System for Your Health Department or Agency
- Small Area Analysis
- Learning ArcView GIS
Exercise 2: Research Project Outline and Abstract due
Speaker: Dr. Claudia Hopenhain and Jay Christen, Linking Health Behavior and Disease Outcomes via GIS
Learning ArcView GIS

Exercise 3: Initial Maps due
GIS and Creating New Shapefiles
Plotting and Producing Quality Maps
Speaker: Dick Gilbreath, Tour of UK Geographics Department Cartography Lab

Exercise 4 due
GIS and Environmental Health
GIS and Chronic Disease
Multivariate Layering
Emergency Responders and GIS
GIS and Time Series
Ethics and GIS

Exercise 5 due
Introduction to HTML
Speaker: Neal Rosenblatt, KY Cabinet For Health & Family Services

HTML
Live Advanced HTML and GIS
Speaker: John Williams, SQL and server-side management of GIS products
Final Presentations
Final Presentations

YOU ARE HAVING TROUBLE WITH A CONCEPT OR HAVE ANOTHER CLASS-RELATED PROBLEM, PLEASE COME SEE ME AFTER CLASS OR IN MY OFFICE. CALLING IS FINE

University policy: If you will need to be absent from class for team events, family issues, or illness, please let me know at least two weeks in advance.
MEMORANDUM

TO: Health Care Colleges Council
FROM: Linda A. Alexander, EdD
Associate Dean for Academic Affairs

SUBJECT: Proposal for CPH 660 GIS Systems & Public Health

DATE: February 27, 2006

It is the intention of the Department of Health Behavior in the College of Public Health to formally establish a course to teach students in the Master of Public Health program about the usefulness of geographical systems when studying public health and about establishing connections between geography and public health outcomes. Other components of the course include ethics, health marketing, demography, epidemiology, manipulating data, and understanding datasets. The course has been taught on one previous occasion, Summer 2005, and was very well received by students. It is being taught again in the Fall of 2006.

This course proposal has been reviewed and approved by the Academic Affairs Committee and the Faculty Council, according to our college's established guidelines.

Further information about this course can be obtained by contacting the course director, Dr. Jeff Johnston, via phone at 7-5678 ext. 82087 or via email at johnstnuky.edu.
UNIVERSITY SENATE REVIEW AND CONSULTATION SUMMARY SHEET

College of Public Health
Name/Title/Phone for proposal contact: Dr. Jeff Jones 7-5678 ext 82087

Instruction: To facilitate the processing of this proposal please identify the groups or individuals reviewing the proposal, identify a contact person for each entry, provide the consequences of the review (specifically, approval, rejection, no decision and vote outcome, if any) and please attach a copy of any report or memorandum developed with comments on this proposal.

<table>
<thead>
<tr>
<th>Reviewed by: (Chairs, Directors, Faculty Groups, Faculty Councils, Committees, etc)</th>
<th>Contact person Name (phone/email)</th>
<th>Consequences of Review:</th>
<th>Date of Proposal Review</th>
<th>Review Summary Attached? (yes or no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Affairs Committee</td>
<td>Rick Crosby</td>
<td>approved</td>
<td>1/30/05</td>
<td>Yes</td>
</tr>
<tr>
<td>Bylaws Task Force</td>
<td>Sue Johnson</td>
<td>approved</td>
<td>2/14/05</td>
<td>Yes</td>
</tr>
</tbody>
</table>

| | | | | |
| | | | | |