May 23, 2006

MEMORANDUM

TO: Ann Wylie
   Interim Dean, Graduate School

FROM: Phyllis Peres
       Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Add a Graduate Certificate in Professional Studies in Public Health Informatics (PCC Log No. 05046)

At its meeting on April 7, 2006, the Senate Committee on Programs, Curricula, and Courses approved the proposal to add a Graduate Certificate in Professional Studies in Public Health Informatics. A copy of the approved proposal is enclosed. Please accept my apologies for the delay in formal notification.

The Graduate School should ensure that this program is appropriately reflected in all University documentation.

CWR/
Enclosure

cc: James Baeder, Chair, Senate PCC
    Sarah Bauder, Office of Student Financial Aid
    Mary Giles, University Senate
    Barbara Hope, Data Administration
    Anne Turkos, Archives
    Linda Yokoi, Office of the Registrar
    Gay Gullickson, Graduate School
    Kristin Owens, Office of Professional Studies
    Ed Hsu, Public and Community Health
    Robin Sawyer, College of Health and Human Performance
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM PROPOSAL

DIRECTIONS:
- Provide one form with original approval signatures in lines 1 - 4 for each proposed action. Keep this form to one page in length.
- Early consultation with the Office of the Associate Provost for Academic Planning & Programs is strongly recommended if there are questions or concerns, particularly with new programs.
- Please submit the signed form to Claudia Rector, Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus.
- Please email the rest of the proposal as an MSWord attachment to pcc-submissions@umd.edu.

DATE SUBMITTED: November 30, 2005

PCC LOG NO: 05046

COLLEGE/SCHOOL: Health and Human Performance

DEPARTMENT/PROGRAM: Department of Public and Community Health

PROPOSED ACTION (A separate form for each) ADD__ V _ DELETE____ CHANGE____

DESCRIPTION (Provide a succinct account of the proposed action. Details should be provided in an attachment. Provide old and new sample programs for curriculum changes.)

Establish an online 12-credit certificate program in public health informatics.
- See attached proposal and syllabus.

JUSTIFICATION/REASONS/RESOURCES (Briefly explain the reason for the proposed action. Identify the source of new resources that may be required. Details should be provided in an attachment.)

Clear need for more public health offerings in an online (e.g., Web-based) environment.

Public health informatics is a cutting edge and burgeoning field that has potential impact on health surveillance.

No new resources will be required.

ORIGINAL

APPROVAL SIGNATURES

1. Department Committee Chair
   
2. Department Chair
   
3. College/School PCC Chair
   
4. Dean
   
5. Dean of the Graduate School (if required)
   
6. Chair, Senate PCC
   
7. Chair of Senate
   
8. Vice President for Academic Affairs & Provost

DATE

12/22/05
12/24/05
4/7/06
3/9/06

VPAAP 8-05
Program Agreement

Graduate Certificate of Professional Studies in Public Health Informatics

February 14, 2006

The University of Maryland is committed to providing educational programs that meet the needs of a variety of audiences. As part of our graduate offerings, the Masters of Professional Studies and the Graduate Certificate in Professional Studies are designed for adult students who wish to increase their subject-matter knowledge as well as prepare them for new challenges related to their professional areas. These programs are managed by the Office of Professional Studies, with academic oversight by Academic units, and housed in the Graduate School.

Academic Oversight Committee Members

CORE Representative (committee chair and graduate director):
C. Ed Hsu, Ph.D.
Assistant Professor
Department of Public & Community Health
College of Health and Human Development

Graduate School Representative:
Ann Wylie
Dean, Graduate School

OPS Program Manager:
Paul Roche
Senior Project Manager
Office of Professional Studies

Certificate Description

Public Health Informatics is broadly defined as the systematic application of information and computer sciences and technology to public health practice and research. It concerns how health data is collected, stored and communicated; how data is processed into information suitable for administrative and clinical decision making; and how computer and telecommunications technology can be applied to support those
processes. The *Graduate Certificate of Professional Studies in Public Health Informatics* is an online, graduate-level program in applied health informatics. The curriculum supports the emerging international movement toward evidence-based approaches to health information management, including evaluation and integration of health information systems for health data collection, analysis, and presentation. It intends to familiarize students with most recent technologies and computer applications in public health education and practice.

The program will provide students with a thorough understanding of the theory and practice of health informatics in the real world. Additionally, students will be required to demonstrate the ability to use scientific and population health principles to evaluate and implement health information systems. Students will learn to use qualitative and quantitative methods for conducting health surveillance activities and enhancing public health preparedness, as well as use computer models to measure and present health outcomes. The certificate program is comprised of four 3-credit courses. There is no research component required and the certificate program can be completed entirely online in 8 months on a part-time basis.

These courses also meet the CEU requirements of the Society for Public Health Educators (SOPHE), an independent, international professional association made up of a diverse membership of health education professionals and students. The online program features chat rooms, threaded discussions and full access to the University of Maryland library services.

**Admissions Criteria**

The admissions policy will reflect current university standards, including the prerequisite bachelor’s degree and a 3.0 GPA is all undergraduate classes. Official undergraduate transcripts from all colleges attended must be provided. As is currently the case, professional experience may be substituted for an entrance exam and students must have completed the prerequisites for courses in the program.

**Required Courses**

**HLTH 688 V - Public Health Information Systems (3 credits)** Public health information systems relate to the employment of technology, planning and management, and applications in health care and public health. The emphasis is on conceptual frameworks as well as a deeper level of engagement on system applications. This is not a course in computer programming; rather the main focus is on the application of technology, with a particular emphasis on the private/public sector of health management. The course is designed to familiarize students with core concepts & issues confronting health managers and practitioners in planning, implementation and evaluation of information systems.

**HLTH 688 U - Geographic Information Systems in Public Health Surveillance (3 credits)** Geographic Information Systems provide essential support for public health
preparedness, response and surveillance. The two major GIS key components are infor-
matics approaches to conducting health surveillance using technologies, and GIS
applications in health care and public health. The course is designed to familiarize
students with core concepts & applications confronting health managers in planning,
implementation and evaluation of geographic information systems.

HLTH 688 W - Information Management for Public Health Professionals (3 credits)
Health information management is concerned with the collection, storage, presenta-
tion and interpretation of health data. This curriculum covers concepts, case study, and
applications of informatics in health care and public health. The main focus is on the
application of technology, with a particular emphasis on the public context of health
management. The emphasis is on both system applications and a deeper level of
engagement on evaluation. It is designed to introduce students to core emerging
information systems that have potential to enhance the effectiveness and efficiency of
health delivery.

HLTH 688 Y - Advanced Health Informatics (3 credits) This course contains 3
modules of advanced health informatics practice, including the research, evaluation and
applications of informatics in public health and health care. The emphasis is on a
deeper level of engagement on health system applications. Several important health
monitoring systems, such as Community Health Information Systems, and NCI cancer
mapping projects will be introduced. The emphasis is on the public sector of health
management. It is designed to familiarize students with core concepts and issues
confronting managers in the health sector associated with planning, implementation and
evaluation of information systems.

**Permanent Course Numbers**

Concurrent to the progress of the Certificate in Public Health Informatics through the
PCC approval process, each of these four courses has been submitted to the
appropriate Departmental and College committees to receive approval as new courses
with “hard” numbers. Receiving approval from the University’s VPAC committee is
anticipated for later this semester.

**Program Sequencing**

Courses will follow the online term format.

**Term III (March 13, 2006 - May 19, 2006)**
HLTH 688 U - Geographic Information Systems in Public Health Surveillance (3 credits)
HLTH 688 V - Public Health Information Systems (3 credits)

**Term IV (June 12, 2006 - August 18, 2006)**
HLTH 688 W - Information Management for Public Health Professionals (3 credits)
HLTH 688 Y - Advanced Health Informatics (3 credits)
Term I (September 11, 2006 - November 17, 2006)
HLTH 688 U - Geographic Information Systems in Public Health Surveillance (3 credits)
HLTH 688 V - Public Health Information Systems (3 credits)

Term II (December 11, 2006 – February 16, 2007)
HLTH 688 W - Information Management for Public Health Professionals (3 credits)
HLTH 688 Y - Advanced Health Informatics (3 credits)

Faculty

Faculty selection and appointments will be made by the Department of Public & Community Health, College of Health and Human Development.

Assessment Plan

The purpose of this plan is to set clear guidelines identify articulated outcomes and ensure avenues for continuous improvement for each graduate certificate and program managed by the Office of Professional Studies. It is our mission to provide programs that meet UMD’s institutional goals and objectives for educational activities.

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures and Criteria</th>
<th>Assessment Schedule</th>
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</thead>
<tbody>
<tr>
<td>A. Students will learn to:</td>
<td>A. Successfully complete quiz questions (80 pts or above)</td>
<td>Web-based achievement evaluation tools (to include quiz, matching questions, calculations and short essays) will be employed to evaluate learning accomplishments. These tools will be used in every 2 class sessions.</td>
</tr>
<tr>
<td>1. Collection, storage, retrieval, analysis and interpretation of health data; 2. Planning, organization, administration, management, and evaluation of health information systems; 3. Describe and analyze the distributions and determinants of disease.</td>
<td>B-E. Successfully complete a concept proposal/paper for the course.</td>
<td>These data will be collected for every class to begin in March 2006.</td>
</tr>
<tr>
<td>B. Students will demonstrate application of fundamental concepts of community health analysis, with special reference to community description, analysis of communication pathways, coordinating provision of health education services, and...</td>
<td>Students will demonstrate their competencies in public health informatics by addressing the following questions:</td>
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C. Students will understand the process of health communication, including risk communication by collecting, analyzing and presenting data correctly.

D. Student will gain competencies of health informatics by summarizing health information and analysis in the proposal and paper required for the program.

E. Students will demonstrate knowledge of describing and analyzing the distributions and determinants of disease by using computer applications and programs.

| 1) What is the type of technology or innovation being considered? |
| 2) What is the background of the health organization that uses this technology? |
| 3) How does this technology fit in the overall strategic plan of the organization? How does the business plan relate to the concept or theory introduced in class? |
| 4) How will the plan be implemented? |
| 5) A “Strength, Weakness, Opportunity and Challenge” (SWOC) analysis. |

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**UMD Roles and Responsibilities**

**Office of Professional Studies**

**Program Manager**
1. perform market research with marketing team
2. meet with campus partners to build internal team for program
3. create budgets
4. manage daily aspects of program
5. provide all necessary administrative support
6. develop Internal Partner MOA
7. coordinate Academic Oversight Committee
8. spearhead approval process on campus
9. manage program logistics (rooms, schedules, student orientation, instructor contracts, campus waivers)
10. manage marketing initiatives to promote program
11. assist with student retention issues
12. liaise with instructors on student concerns
13. evaluate the program
**SPOC Manager:**
14. manage the creation of web sites for admission and registration processes
15. enter courses into the system (with appropriate codes)
16. assist students with online admissions and registration
17. monitor student academic progress with graduate school
18. answer administrative questions from students
19. monitor enrollments and student progress
20. manage all program-related forms (admissions w/graduate school, graduation application, etc.)
21. assist with graduation clearances

**OPS Financial manager:**
22. review the budgets
23. make transfers to academic partners

**Graduate School**
1. provide rep to serve on Academic Oversight Committee
2. ensure that Graduate School requirements are met
3. process graduate student admissions
4. monitor academic progress

**CORE Department**
1. provide rep to serve on Academic Oversight Committee
2. assist with identifying appropriate audiences for marketing initiatives
3. identify instructors for the core courses
4. manage academic disputes
5. manage grading process with instructors/dept via UMEG
6. provide FRS account # for revenue transfer

**Elective Departments**
1. may serve on Academic Oversight Committee
2. identify instructors for the elective courses
3. manage academic disputes
4. manage grading process with instructors/dept via UMEG
5. provide FRS account # for revenue transfer
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**Elective Departments**
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**Campus Approvals:**

Judith K. Broda, Associate Provost and Dean, Office of Professional Studies

Robert S. Gold, Dean, College of Health and Human Performance

Elbert D. Glover, Chair, Department of Public and Community Health

C. Ed Hsu, Assistant Professor, Department of Public and Community Health

PCC, Graduate Council

Ann Wylie, Dean, Graduate School

PCC, Campus Senate

Phyllis Peres, Associate Provost, Academic Affairs
1.B. By FY08, the Department of Public and Community Health hopes to reach a steady state of eight courses per year (two courses during each of the four Twelve-week terms). The department is planning for a total of 160 registrations (seat count) per year.

According to a market research report conducted for the Office of Professional Studies, as an emerging occupation in the public health and healthcare fields, the market for a certificate in public health informatics is broad. A scan of public health employment opportunities found that informatics competencies were newly emerging and were required in the areas of government, education, healthcare, policy research, foundations, and professional associations. Potential markets for the program include employees of local, state, and federal health departments, health educators, healthcare administrators, physicians, nurses, health insurers, researchers, and statisticians. Job functions vary from upper level managers to project managers, policy and data analysts, and medical and healthcare researchers.

1.C. Public health is a large, interdisciplinary field. The American Public Health Association alone claims a membership of 50,000 practicing professionals in over 50 different healthcare occupations. Currently, there are three fully online programs (Duke University’s School of Nursing, University of Illinois – Chicago’s School of Public Health, and University of Pittsburgh’s School of Library and Information Sciences) and one hybrid program (University of North Texas’s School of Public Health) with a public health informatics focus. Given the estimated size of the market, and the fact that certain segments of the healthcare field require that their practicing professionals be credentialed and seek continuing education, we believe that the market not only can support another program, but needs another program to meet the expected growth in the need for professionals with informatics competencies.

2. B. All instructors who teach in the program will be members of the graduate faculty and be approved by the Dean of the college. Faculty will teach on overload.
Addendum

March 16, 2006

GCPS in Public Health Informatics

In response to the University Senate PCC’s request for additional information regarding the GCPS in Public Health Informatics, the Department of Public and Community Health is providing the following responses to questions submitted in an e-mail dated March 3rd to Ann Wylie from the committee.

1. *The committee felt that an understanding of statistics was absolutely essential to this area of study, and recommended that either a course in statistics be incorporated into the curriculum or that the criteria for admission be amended to require an appropriate background in math and statistics.*

An undergraduate or graduate course in statistics, or a math equivalent, will be added as a requirement for admission into the program.

2. *The courses are conducted online, in terms shorter than those offered in the University’s regular semesters. The committee expressed concern that students in these online courses would not be getting sufficient instructional time equivalent to that which is required in regular on-campus courses.*

On May 1, 2000, the full University Senate approved the Master of Life Sciences program in a 10-week-term format. This was the first online program offered by the University. On June 30, 2000, the Finance Committee, including the President and Provost, approved the 10 week format for online programs. The Master of Life Sciences and the Master of Engineering in Fire Protection are both fully online, asynchronous programs and utilize the 10 week format in their courses. Faculty members who teach in those programs believe that the 10 week format is appropriate because of the rigor and intensity of the course material, and because of the intensity of the interaction required among the students and instructors. Experience with these programs has shown that the material covered in the courses equals, and in many cases, exceeds that of a traditional 15 week, face-to-face course.