

University of Maryland, College Park

Department of Public and Community Health

HLTH 688 V Public Health Information Systems

Instructor: C. Ed Hsu, PhD, Assistant Professor
of Public Health Informatics

OFFICE HOURS

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Monday – 17:00-20:00

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Tuesday – 17:00-20:00

Semester: Spring (Starting 3/13), 2006

Wednesday – 9:00-17:00

WebCT Time: The curriculum is on WebCT at all time.
Please complete course assignments as specified in the week.

Required Textbooks & Other Readings	<p>Required: <i>Patrick W. O’Carroll, William A. Yasnoff, M. Elizabeth Ward et al (eds). <u>Public Health Informatics and Information Systems</u>. Health Informatics series. Springer Publishing. January 2003. ISBN: 0387954740.</i></p> <p>Highly Recommended: <i>Tan, J (eds). <u>E-Health Care Information Systems: An Introduction for Students and Professionals</u>. Jossey-Bass Publisher. April 2005. ISBN: 0-7879-6618-5.</i></p>
Course Description	<p>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. It 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. It is designed to familiarize students with core concepts & issues confronting health managers and practitioners in planning, implementation and evaluation of information systems.</p> <p>Each module consists of several book chapters or research articles to help students understand core concepts and practice in health informatics. Students are required to complete quiz or essay questions after each class. Students are expected to submit a project proposal that demonstrates competencies of public health informatics practice.</p>
Course Objectives	<p><u>At the conclusion of this course, the student will be able to:</u></p> <ol style="list-style-type: none"> (1) Become familiarized with at least one web-based learning management system (e.g., WebCT). (2) Demonstrate the ability to explore alternative “E-Health” solutions. (3) Successfully demonstrate the use of Internet solutions to perform research in a public health or healthcare context. (4) Develop a health informatics proposal for the use of internet technology in health organizations.

<p>Course Policies</p>	<p><u>Missed quiz or essay question assignments:</u></p> <p>You are our greatest class resource. Your thoughts, ideas, questions and comments will enrich everyone’s learning experience, so please be actively involved in class. Enthusiastic online discussions are welcome! Come to class prepared by reading the text and articles of each online module. If you cannot complete the course requirement, or if you are ill or encountering personal difficulties, please call or email to the instructor as soon as possible. You can also contact the Learning Assistance Service (301-314-7693) and or the Counseling Center (301-314-7651). If you are unable to be in class on the day of a class or an assignment, please discuss this with the instructor BEFORE the actual week of the class or assignment.</p> <p><u>Accommodations for students with disabilities:</u></p> <p>If you have a documented disability and wish to discuss academic accommodations for class requirements or other needs, please talk to/email the instructor as soon as possible. You will need documentation from Disability Support Service (314-7682.) If you intend to take any or all exams at DSS it is your responsibility to notify me as soon as possible.</p> <p><u>Academic Integrity:</u></p> <p>The University's code of academic integrity is designed to ensure that the principle of academic honesty is upheld. Any of the following acts, when committed by a student, shall constitute academic dishonesty:</p> <ul style="list-style-type: none"> ✓ CHEATING : intentionally using or attempting to use unauthorized materials, information, or study aids in an academic exercise. ✓ FABRICATION: intentional and unauthorized falsification or invention of any information or citation in an academic exercise. ✓ FACILITATING ACADEMIC DISHONESTY: intentionally or knowingly helping or attempting to help another to violate any provision of this code. ✓ PLAGIARISM: intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise. <p>For more information see: http://www.inform.umd.edu/CampusInfo/Departments/PRES/policies/iii100a.html</p> <p><u>Religious Observances:</u></p> <p>The University System of Maryland policy provides that students <i>should not be penalized because of observances of their religious beliefs; students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances.</i> It is the student’s responsibility to inform the instructor <u>in advance</u> of any intended absences for religious observance.</p>
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Public Health Information Systems

- S y l l a b u s -

Week 1 Week of 3/13	<p>Topic: Introduction: Course Outline. An overview of major concept and practice of health information systems.</p> <ul style="list-style-type: none"> Library Resources: Introduce UMD research resources available for conducting research in public health information systems. <p>Required Reading / Assignment: Chapter 1: O’Carroll et al.</p>
Week 2 Week of 3/20	<p>Topic: Introduction to research in public health informatics.</p> <p>Required Reading / Assignment: Chapter 2: O’Carroll et al. History and significance of information systems and public health.</p>
Week 3 Week of 3/27	<p>Topic: Core competencies in public health informatics</p> <p>Required Reading / Assignment: Chapter 6. O’Carroll et al. Koo D. O’Carroll P and Laventure M. Public Health 101 for Informaticians. J Am. Med. Inform. Assoc. 2001. 6: 585-597.</p>
Week 4. Week of 4/3	<p>Topic: Evaluation for Public Health Informatics.</p> <p>Required Reading / Assignment: Chapter 12 O’Carroll et al.</p>
Week 5. Week of 4/10	<p>Topic: The National Vital Statistics System.</p> <p>Required Reading / Assignment: Chapter 14 O’Carroll et al. <i>Project pre-proposal due.</i></p>
Week 6 Week of 4/17	<p>Topic: New Means of Data Collection and Accessibility</p> <p>Required Reading / Assignment: Chapter 19 O’Carroll et al.</p>
Week 7 Week of 4/24	<p>Topic: Geographic Information Systems (GIS) in public health</p> <p>Required Reading / Assignment: Chapter 21 O’Carroll et al.</p>
Week 8 Week of 5/1	<p>Topic: Decision Support and Expert System in Public Health.</p> <p>Required Reading / Assignment: Chapter 23 O’Carroll et al.</p>
Week 9 Week of 5/8	<p>Topic: Community Health Information System</p> <p>Required Reading / Assignment: Chapter 27 O’Carroll et al.</p>
Week 10 Week of 5/15	<p>Topic: Summary and Revisit of Key Concept and Practice.</p> <p><i>Final assignment due.</i></p>

Grading					
190-200 points	A+	180-189 points	A	170-179 points	A-
160-169 points	B+	150-159 points	B	140- 149 points	B-
130-139 points	C+	120-129 points	C	110-119 points	C-
109 & below	F				

Course Requirements and Grades:

Grades will be based on the following criteria:

- 1) Module assignments: Quiz and Essay Questions (90 points),
- 2) Pre-proposal (50 points),
- 3) a final, full proposal (60 points).

Final grade: A letter grade will be assigned to as a final grade according to the aforementioned grading rules. Attendance is expected and 20 points will be docked per assignment missed if a student misses more than 2 class assignments without advanced notice and/or due justifications (as explained in the “*course policies*” section). A 10% penalty will be assessed against late submitted assignment. Final project should be conducted by individual student, and the project should not duplicate the contents submitted for other courses.

Pre-proposals are expected to be no more than 3 pages, and full proposal are expected to be no more than 20 pages, and should utilize concepts acquired in this course. Written assignments are expected to be proofread before submission for a grade. Papers with excessive typos/grammar errors may not be graded. Potential topics should be discussed with the instructor. Examples of topics may include but are not limited to the following areas: hospital information systems, telemedicine, clinical decision-support systems, computer-based patient records, GIS applications in health, and community health information systems.

Final Project: A proposal for public health information Implementation

Students are expected to prepare a health informatics proposal outlining the use of a particular technology within a health care organization. A sample proposal will be provided. This informatics proposal assignment shall at least address the following questions:

- 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.

This assignment will be completed in two phases:

Assignment 1: Proposal - 3 pages maximum due at the end of Week 5. 50 points.

Assignment 2: Less than 20 pages. Due one week before class ends: 60 points. Due at the end of last week of class.

Competencies

This course most closely relates to the following competency criteria of **community health education** graduate programs

1. Collection, storage, retrieval, analysis and interpretation of health data;
2. Planning, organization, administration, management, and evaluation of health info systems;
3. Describe and analyze the distributions and determinants of disease.

In overall, the course provide an opportunity for students to understand community health analysis, with special reference to community description, analysis of communication pathways, coordinating provision of health education services, and roles of institutions in relation to learning and the behavioral change process.