

## **COURSE TITLE: *PUBLIC HEALTH INFORMATICS***

### INSTRUCTORS

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### COURSE DESCRIPTION

This course presents the knowledge infrastructure, functions, and tools in the area of public health informatics. Public health informatics deals with the collection, verification and utilization of data related to populations. Public health informatics also focuses on using this data to generate knowledge in support of public health practice and policy development/dissemination. The intended audience comprises public health professionals.

### COURSE OBJECTIVES

- To understand the structure and content of data sources commonly used in public health.
- To gain in-depth knowledge of the types of computer-based tools available to public health professionals
- To be able to participate in the design of data sources and information systems to be used in public health

At the end of the course, the students shall be able:

1. To demonstrate an understanding of available technologies for electronic dissemination of information (Web, Listserv, e-mail)
2. To have an in-depth understanding of the data standards used in healthcare (HL-7, EDIFACT, X12N)
3. To have a working knowledge of existing public health databases
4. To demonstrate an understanding of information retrieval strategies for finding relevant public health information from existing public health databases
5. To create a design specification for a public health reporting system
6. To demonstrate an understanding of the organizational and management issues related to the implementation of a public health reporting system.

# PUBLIC HEALTH INFORMATICS (

## Course Outline

Estimates are based on 12 hours of classes and 12 hours of homework (reading plus final assignment)

Hour	Topic	Lecturer
1	Overview of public health information management	Doebbert
2	The impact of informatics on public health	Doebbert/Hogarth
3&4&5	Public health data sources/databases – evaluating, searching, compiling	Hogarth
6	Coding systems (ICD-9, ICD-10, CPT)	Hogarth
7	Information dissemination tools	Hogarth
8&9&10	Available Data standards in healthcare (HL-7, X12N)	Doebbert/Hogarth
10&11	Assignment --- overview, specifications document format, content	Doebbert/Hogarth
12	Project presentations	class

### Assignment:

Complete a specification document addressing the design of a public health reporting system for a particular disease. The analysis is to contain the following components:

- Statement of the problem being addressed
- Specification of primary data goals and features
- Identification of needed data and mechanisms for obtaining the data.
- Development of a communications plan for the implementation – covering both the public health agency and the reporting entities (healthcare providers)
- A project plan including timeline (no cost estimates) in Microsoft Project, an organizational structure of a unit needed to accomplish this task, and an executive summary not to exceed 1 page.

### STUDENT EVALUATION

Student evaluation will be based on weekly quizzes, a written assignment at the end of the course. The written assignment will also require a powerpoint presentation overview of the project to be presented to peers on the last day of the course. The course is intended to be a PASS/FAIL (S/US) course.

HOURS: 2 classroom hours per week.