



HEALTH INFORMATION AND DECISION SUPPORT SYSTEMS HPA 465

Course Description: This online course provides an introduction to computer assisted management information and decision systems in health organizations: analysis and design of databases; data and information flow; reports; and uses microcomputers.

Course Overview: Recent health reform initiatives have increased the need for informed decision making by consumers, public health administrators, community leaders, providers, insurers and governments. The effectiveness of public health practitioners and researchers depends, among other factors, on the availability of well-designed information systems as well as timely and reliable information. Public health administrators need to have a working knowledge of the functionalities of existing public health information systems and the management of Information Technology resources. This course introduces students to the role of information systems in public health practice, information technology personnel and change management, privacy and confidentiality issues in development and utilization of information systems, and the development of public health surveillance and decision support systems.

Learning Objectives: Upon successful completion of this course, students will be able to:

- Discuss in details the structure and functions of computer hardware, software, networking and operating systems.
- Apply the concepts of General Systems Theory to the design and development of public health information systems.
- Analyze the role of public health information systems and informatics in decision-making.
- Evaluate the impact of developments in Electronic Medical Records technologies and standards on the evolution of health information systems.
- Explore the security, privacy and confidentiality issues involved in utilizing health data and information systems.
- Evaluate the determinants of success/failure of investments in information systems.
- Discuss (using change management principles) the policy and managerial issues resulting from the introduction of information systems into healthcare agencies.
- Identify the key characteristics of decision support systems and formulate a public health decision support framework.
- Learn about the different types of health information systems such as laboratory information systems, executive information systems, and clinical decision support system.
- Evaluate the impact of HIPAA on the development and utilization of health information systems.
- Employ social network technology, Wikipedia, in addressing public health problems.

Prerequisites: Graduate or professional standing; and approval of the department.

Course Management System: The course content will be delivered via UIC’s Blackboard Learning System. Students will be enrolled into the Blackboard course site each semester after registering. The Blackboard course site is the primary content area for instructors to post lecture notes and articles, post and update grades, and make announcements. Students are expected to log into their course site regularly to learn about any developments related to the course. Learn more about Blackboard at <http://blackboard.uic.edu>.

Recommended Textbook:

Public Health Informatics and Information Systems. Patrick W. O’Carroll, William A. Yasnoff, M. Elizabeth Ward, Laura H. Ripp, and Ernest L. Martin, Editors. Published by Springer-Verlag, New York, 2002.

NOTE: Students are expected to purchase the reference book from Amazon.com, Barnes and Nobles or the University of Illinois Health Sciences Bookshop.

Other Learning Resources: Required and optional readings available through Blackboard.

Attendance/Participation: Students are expected to participate frequently in the discussions. Log in on the blackboard course site at least 3 days each week. An absence does not excuse any student from participating in discussions and submitting the assigned works.

Participation implies meaningful interactions with your colleagues. Always respect the opinions of your colleagues. Credit does not accrue merely for logging in and reading your colleagues’ responses. The quality of your discussions will significantly influence your grades.

Outline*:

*Outline based on a 12-week schedule

Week	Topic(s) to be Discussed
1	Introduction to student computing getting familiar with UIC blackboard site and meet and greet; Fundamentals of Public Health Informatics I
2	Fundamentals of Public Health Informatics II
3	Introductory to Online Library Tools and the Internet
4	Conceptual Foundations of Information Systems; The General Systems Theory
5	Computer Networking and Telecommunication

6	Information Systems Personnel and Change Management
7	Electronic Medical Records; Data Standards in Public Health
8	Determinants of Success/Failure of Information Systems
9	Health Decision Support and Executive Information Systems I
10	Health Decision Support and Executive Information Systems II
11	Health Insurance Portability and Accountability Act (HIPAA), Privacy, Security and Confidentiality
12	Review of state and federal key Public Health Information Systems; Introduction to Laboratory Information Systems (LIS) and Health Information Exchange (HIE)

Course Organization & Assignments:

Students will usually work in small groups in order to answer questions posted to their group discussion boards. Occasionally, they will all work together in order to address the issues raised in other groups' responses. All students will be responsible for initiating team communications, playing significant roles in the decision-making process and presenting the group's responses to the assignments. All students will play leadership roles during the session.

Late assignments are not encouraged.