THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF MEDICINE AND HEALTH SCIENCES

CAPITALIZING ON OUR STRENGTHS: TEACHING HEALTH INFORMATICS COURSES

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INTRODUCTION

This poster presents the experiences of two health sciences librarians teaching health informatics in semester-length credit courses-- one for undergraduate health sciences students in a distance education format and the other for graduate students in a health information technology program in a traditional classroom environment.

WHAT DO WE BRING TO THE TEACHING PROCESS & SUBJECT MATTER?

- Extensive experience teaching faculty and students
- Strong knowledge of technology to support workflows
- Expertise in standards and vocabularies
- High comfort level in the electronic environment
- Understanding of user needs, effective user interfaces, needs assessments
- Strong familiarity with health sciences education and the health care environment
- Ability to explore and learn new topic areas—especially those with high impact on health sciences libraries including e-science, bioinformatics, and the electronic health record
- Ability to draw on local experts for insight and the occasional guest lecture

WHAT DO WE TEACH?

LSC871 Health Informatics

Goal
This course will prepare health sciences librarians and other IT professionals to function in and understand a national health care environment which is data-driven, evidence-based, and fully electronic and which will increasingly integrate research and clinical practice in an interdisciplinary manner that reaches from the bench to the bedside.

Topics
- Healthcare Informatics: Definitions, status of health care computing
- Health Information Technology: life cycle—needs assessment, implementation
- Healthcare Informatics Infrastructure: legal, governmental, standards
- Applications: Knowledge representation and visualization/knowledge engineering/decision support and ontologies
- The electronic health record—why needed, what it accomplishes, how to implement?
- eScience: CTSA, data warehousing, data integrity, collaboration tools
- Bioinformatics/Genomics/Computational Biology
- Education/competencies/roles for health professionals
- Public Health Informatics: evidence-based practice and disease surveillance/prevention and telehealth

HSCI 2113 Informatics in the Health Sciences

Goal
This course will provide students with an introduction to healthcare informatics, including management and clinical information systems, and their role in administration, clinical, public health and research arenas in health care.

Topics
- Introduction to Health Care Informatics
- Types & Quality of Health Information
- Data Management
- Data, Information & Evidence
- Heath Care Informatics Infrastructure
- Needs Assessment in Health Care Information Technology
- Systems Lifecycle
- Systems Integration
- Electronic Health Record
- Changing the Information System & Organizational Culture
- Informatics in Public Health
- Informatics in Research

HOW AND WHOM DO WE TEACH?

In-person class

Graduate students in the health sciences library track and the Health Information Technology program at the Catholic University of America
Instructional Methods: Lecture, class discussion, and demonstrations with hands-on components, case studies.
Readings: No required text; recommended text: Cleveland, A.D. and D. B. Cleveland (2009). Health Informatics for Medical Librarians. New York: Neal Schuman

Distance education class
Undergraduate students in health sciences programs including Clinical Research Administration, Emergency Health Services, etc.
Instructional Methods: Extensive readings plus weekly 2-page paper or participation in online discussion board
Required readings: readings assigned from online journals articles and book chapters.

CHALLENGES

- Time—It takes times to prepare syllabi and class content, select readings, prepare weekly sessions, grade assignments and keep the rest of your life going!
- Mindset—a semester-long course requires a very different mindset from a two-hour workshop on a specific topic or resource. Your viewpoint needs to be more comprehensive and cohesive. How does each lesson relate to the whole? How does the whole relate to the rest of the curriculum and its overall goals?
- Staying up-to-date—the field of health informatics is changing almost daily. You need to keep scanning the environment to learn about new developments, concepts, policies, and technologies.
- Flexibility-- you can't be afraid to change course and accommodate breaking news or let a student discuss their experience learning how to use ICD-10!
- Patience—even on-campus students send lots of e-mails and expect instantaneous responses; digital dropboxes always do unexpected things; and every student has at least one life crisis a semester!

BENEFITS

- Continuity—you get to know your students and mark their progress. You continuously build on your own knowledge set and teaching skills. You get to teach a subject more fully.
- Satisfaction—teaching motivated adults is fun. They bring their own educational and work experiences to class and most are ready to learn and share. They don't expect you to know absolutely everything but to guide them in the right direction or give them a framework for further learning. You often learn together!
- Increased self esteem—you learn that you have the knowledge and skills to engage students for a whole semester, develop enthusiasm for your field, and learn valuable skills that are important to your own organization.

SUMMARY

Health sciences librarians have skills and knowledge sets that are uniquely suited to teaching health informatics. The challenge of teaching a full-semester course can be daunting but can also be deeply satisfying. In addition, the Library itself can benefit as librarians deepen their subject knowledge, gain a greater understanding of the overall curriculum and educational program, and enhance their teaching skills. Due to librarian involvement in teaching health informatics, there has been increased consultation with faculty in the Health Services Management and Leadership Program and growing involvement in support for e-science and data management.