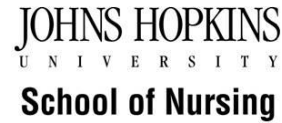


EMMIT@



***1st International Nursing and Healthcare Informatics
Training Course in the Eastern Mediterranean Region
May 7-12, 2010; Lebanon, Beirut***

Course Plan

Introduction to Nursing and Healthcare Informatics

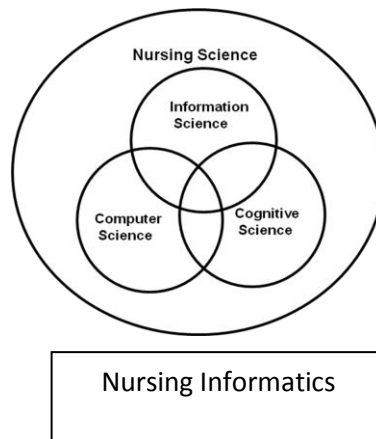
This course is conceptualized as a 5 day “short course” in Nursing and Healthcare Informatics that will be offered in Beirut, Lebanon in May 2010. This is a draft program which may undergo further modifications. Lecture sessions are a combination of lecture presentation of material, open dialog/experience sharing, interactive computer laboratory experiences, and question and answer periods. We also plan to offer several optional field trips to local healthcare facilities for additional observation and practical experiences in Informatics.

Topics By Day

DAY 1 – Morning Hours (2 lecture sessions- combined)

Informatics in Nursing & Healthcare – This first morning we will cover the basic definitions of informatics, the history, and why informatics is gaining in popularity. We

will cover the core sciences of informatics, how they intersect, and how they are influenced by the given healthcare practice domain. We will discuss the data, information, knowledge, and wisdom continuum and how informatics techniques are used to support the transformation along this continuum (how IT helps to transform data into information, then into knowledge, and supports the human in gaining wisdom). We will discuss education in Nursing Informatics, and discuss how Nursing Informatics is (or is not) being viewed in other countries. We will cover how NI intersects with Medical Informatics, Public Health Informatics, and other Informatics specialties in health.



DAY 1 - Afternoon Hours (2 lecture sessions - combined)

The *technology of informatics* will be covered in this afternoon session. We will discuss existing HIT systems and emerging trends including the components of systems frequently found in healthcare environments such as electronic healthcare record systems (EHRs), Provider order entry (POE), Picture Archiving & Communication Systems (PACS – or digital xray), ADT systems (Admission, Discharge, Transfer), pharmacy systems, medication administration systems, decision support systems, integrated electronic guidelines, personal health records, etc. We will also discuss the types of end user devices that a nurse or other health care personnel may encounter in the process of care – such as Computers on Wheels (COWs), barcode medication administration systems, wireless glucometers, RFID, telemedicine devices, etc.

DAY 2 – Morning Hours (2 lecture sessions)

Session 1: *Standards in Healthcare* – we will define standards in healthcare and detail their importance in informatics. We will cover standards that are used, in general, in healthcare informatics, such as ICD-9 (International Classification of Disease, or the ICNP – International Classification of Nursing Practice). The purpose of this session is to emphasize the importance of standardization so that data exchange can occur with minimal loss of meaning as we move patient data from one system to the next. We will discuss standards that have relevance to health and healthcare such as standards used to support guidelines/evidence based care, emerging standards to integrate patient-centric personal health records, and standards necessary to support data flow and continuity of care as a patient moves from setting to setting.

Session 2: *Decision-Making in Healthcare* – in this session we will cover decision making in healthcare and how better decisions support higher quality healthcare. We will cover the human decision-making process, define decision-making, and discuss how automation can help humans make better decisions. We will then move decision making into the healthcare domain and discuss how healthcare information technology (HIT) can support better decision making, how this occurs, and the requirements for clinical decision support systems to work in the first place. We will discuss the core concepts of clinical decision support - including the good and the bad.

DAY 2 – Afternoon Hours (2 lecture sessions & optional field trips)

Session 1: *Evidence-based Practice, Informatics, Quality & Safety* - In this session, we will cover the basics of evidence-based practice, what it is, how it is defined, and how different people and countries use healthcare information technology to support EBP. We will discuss the issue of translational latency (also known as the “Know-Do” gap) and discuss the foundations of quality and safety in care of the patient. We will then discuss how informatics techniques can be used to support better patient outcomes by delivering best practice and current knowledge to the point of care at the moment of need. We will also detail how informatics can be used to improve patient safety and support the provision of higher quality care.

Session 2: *Legal & Ethical Issues in the Healthcare Information Technology* – in this session we will define privacy, confidentiality, and security and differentiate between them. We will discuss these concepts and how they fit within different cultures and countries. Using the IMIA Ethical Guidelines for HIT professionals, we will talk about the ethical challenges and threats that face those who are working with personal health information.

Field Trips – To Be Announced. Seats limited.

DAY 3 – Morning Hours (2 lecture sessions)

Session 1: *Selecting a Health Care Information System*- in this session we will present the Systems Development Life Cycle (SDLC). We will cover how to do a needs assessment, how to construct a committee to guide the selection, methods for understanding the current system, determining system requirements, how to solicit for systems that meet your needs, how to assess the “fit” of a proposed system with your needs, and how to negotiate for the best system possible.

Session 2: *Information Systems Training* – in this session the goal will be to discuss how best to train other nurses and health care workers as HIT is implemented in a healthcare setting. Many times, systems are purchased and installed without a solid plan for how the staff will be trained on how to use it, and this can cause major problems. We will cover how to assess user training needs (i.e. – are your staff member computer literate or not? How many people require training? How will you schedule training sessions? Who will teach the classes on how to use the new system, etc.), how much training can be estimated to cost (it is never free); different ways to train users, etc. We will also discuss how to evaluate the learning outcomes of your training sessions.

DAY 3 – Afternoon Hours (2 lecture sessions & optional field trips)

Session 1: *Contingency Planning and Disaster Recovery* – in this session we will cover the concepts of contingency planning and disaster recovery for HIT enabled environments. Just like fire safety and disaster planning in a hospital for the personnel

and patients – a good backup plan and disaster response plan must be in place for HIT-enabled care settings. What happens when the lab system goes down? What happens if you database crashes and data is lost? What happens in the case of a natural disaster? Nurses who work in places that have HIT must participate in planning for what happens when the system “goes down”, how to protect our patients and how to help a clinic or a hospital to re-start after a major disaster (like a hurricane, an earthquake, a fire, etc.).

Session 2: *Human Factors – Building & Buying Systems that Support the User* (modeling what clinicians do – workflow, etc.). This session will focus upon how HIT that is improperly built can actually cause clinicians to work harder and make more errors instead of vice versa. Knowledge of this topic area will help the nurse and other health care providers understand how design can cause error, and how to detect a problem before you buy or before you implement. We will cover the basics of how the work of a clinician should be modeled and supported to prevent “unanticipated error” that sometimes occurs when a new HIT system is implemented. At the completion of this session, students will be able to identify common user interface errors and suggest alternatives.

Field Trips – To Be Announced

DAY 4 – Morning Hours (2 lab & lecture sessions- combined)

Sessions 1 & 2: *Investigating Healthcare Information Technology- Examples from the Field* – in this session, we will demonstrate the use of examples of health care information technology that nurses may see in practice and we will discuss various features of EHRS that are designed to support the provision of safe and effective patient care. In the computer lab at AUB, we will access an EHR (non-production; simulator) that is being used in many major hospitals in the US, and possibly others. This session will be part of a rotation, ½ of class rotates to classroom while ½ rotates to the computer lab for hands on experiences.

DAY 4 – Afternoon Hours (2 lab & lecture sessions- combined)

Sessions 1 & 2: *Simulation in Education and Instructional Applications of Computer Technology* (teaching healthcare personnel & patients) – in this session we will examine the use of computing technology to “reach and teach” nurses, other healthcare providers and patients. We will examine current methods of providing educational support via information and communication technologies such as fully online, blended approaches, correspondence courses, etc. We will also examine how such technologies are being used globally to scale up the nursing workforce and educate nurses and Community Health Workers in previously inaccessible areas of the world. We will spend time in the AUB simulation lab for some “hands on” experiences. This session will be held in two parts and attendees will rotate between classroom and lab in groups.

DAY 5 – Morning Hours (1 lecture session & Wrap Up) One Half Day

Session 1: *Global E-health – Electronic Communication and the Internet/ Social Networking in Health* – in this session, we will define electronic communication and discussion electronic communication in relation to the Internet and World Wide Web. We will also define what e-health is, and how it is being deployed around the world. We will discuss the technologies that are being used (smart phones, internet kiosks, internet vans, etc.) and how these technologies are reaching into areas of the globe that are very remote and inaccessible. We will also discuss how the World Health Organization is getting involved in e-health and some of the global projects that have been successful. We will discuss different services that are available on the internet and we will discuss the good and the bad of internet information flow. We will discuss how to distinguish quality information and quality resources on the Internet and identify good sources of reliable information for nurses and patients to use. We will also cover the concept of “Social Networking” such as Facebook, Twitter, etc. and how this is impacting healthcare Students will learn some of these approaches and will be able to

consider ways that they can contribute to the global e-health effort or utilize the techniques of e-health in their own environments.

Session 2: *Discussion, Wrap up, and Evaluation* – this closing session will enable us to evaluate this “short course”, share our perspectives, and discuss plans for the future.

CLOSING CEREMONY