

MBA 8559: Introduction to Healthcare Information Systems (HCIS) Spring 2009

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Preliminary Syllabus for: MBA 8559: Introduction to Healthcare Information Systems (HCIS)

Prerequisite(s):

Basic PC skills, including the ability to competently use Word, PowerPoint, Excel, email, Internet browsers, and web-based search engines. Basic understanding of information technologies, including personal computers, the use of computer and information technologies in business settings, and web-based eCommerce, will be needed, as this course focuses on adaptations of these tools to the healthcare settings. Basic understanding of healthcare as a consumer and/or health professional will be needed. This course is NOT, however, a deeply technical or clinical course, and advanced training, experience or certification is not required.

It is the student's responsibility to be certain that the prerequisites have been successfully completed. If at any time during the semester it is determined that a student has not completed the prerequisites and/or does not apply sufficient additional research and study time to keep up with the class, the student can be administratively dropped from the course without credit or tuition refund.

Required Text, Cases, Misc.:

- (1) No single current textbook exists for this subject because the field is in the midst of intense new development. The students will be given access to newly-released government, industry, and research manuscripts, reports, and books during this course so that what they learn in this class will be current with the latest developments in industry activities and government policies.
- (2) Harvard Business School and other publisher's Case Studies Case studies – including analysis, report writing, and presentations may be used to supplement the coursework. (**Do not purchase these before class begins**; they are representative, and a current list will be provided to you before any cases need purchased and downloaded from the publisher.)
 - CareGroup – February 2003. [Harvard Business Case # 9-303-097]
 - CVS: The Web Strategy - March 2000. [Harvard Business Case # 9-500-008]
 - General Electric Medical Systems – February 2003. [Harvard Business Case # 9-702-428]
 - Moore Medical – September 2001. [Harvard Business Case # 9-601-142]
 - Novartis – August 2001. [Harvard Business Case # 9-601-057]
 - Pfizer's Virtual CIO – July, 2004 [Harvard Business Case # 9-305-018]
 - Replacing Hong Kong's ID Cards – November, 2001. (Hong Kong University/Harvard Business Case # HKU-162)
- (3) Wall Street Journal and other timely readings to be assigned (or posted on the class Web site.)
- (4) Reserve Reading textbooks and articles may be made available at the Library or via a secure electronic site as allowed by law.

Required Supplies and Facilities:

A robust access to the Internet without firewall interference that allows downloading documents and careful Internet-based research, plus Microsoft Office software: Word, PowerPoint, and Excel.

Course Description:

The goal of this course is to provide participants with an overview of the range of contemporary concepts and applications in the Health Care Information Systems (HCIS) field. Over the years, information systems have become increasingly important in the management of health services delivery. In the US, a Nationwide Healthcare Information Network (NHIN) is being designed, piloted, and implemented under a 10-year initiative that President George W. Bush launched by a Presidential Executive Order in 2004. Similar efforts are under way in most nations around the world, and the research and applications in the HCIS field are therefore undergoing major new changes to meet 21st Century healthcare, finance, policy, and technology challenges.

Hospitals, Community Health Networks (CHNs), Health Maintenance Organizations (HMOs), Integrated Delivery Networks (IDNs), government agencies, medical groups, private physicians, and nurses are all exploring the potential of information systems to handle the large flow of information. Topics covered will include: HCIS frameworks - theories, methods, and applications overview; Systems concepts and health care delivery; Fundamentals of management information systems (MIS) concepts; Data, Information, and Knowledge; Information flows; Patient flows; Hospital Information Systems – electronic health record, clinical and operational nomenclature systems and interoperability frameworks, databases; Management functions and roles in health care; Systems development methodologies as applied to health care. The course will also survey various contemporary facets of HCIS technologies, including: Medical informatics - clinical and physician decision support, Nursing informatics - nursing station support, Telemedicine, eHealth, Integrated databases, Data communications and Networks, Artificial Intelligence, Expert System, Neural Network

applications in medicine; HCIS on the world wide web and internet - sources, retrieval techniques; TQM in health care; Health Information Resource Management; Operational Efficiency, Safety, and Efficacy, Security and Privacy Issues; Law, ethics, and regulatory topics in HCIS.

Learning in this course will be accomplished through a very active combination of lectures and interactive discussions, hands-on exercises, case analysis and discussion, group presentations, research projects, and quizzes.

Course Objectives:

By completing this course, students will be able to:

- understand the current state of HCIS and be able to follow and interpret innovations in the field;
- understand the conflicting and overlapping roles, goals and needs of key HCIS stakeholders, including physicians, patients, families, government, and insurers;
- identify critical success factors for HCIS from each stakeholder's point of view;
- articulate the pros and cons of various HCIS alternatives and initiatives;
- recognize the key management issues associated with implementing and supporting contemporary HCIS resources; and
- appreciate the unique importance of the security, legal, ethical, and privacy issues in HCIS and understand how they are impacting society, industry, and clinician actions and HCIS development.

Class Schedule and Assignments will be provided separately.

Course Requirements [and Grading Scheme]:

1. **Participation:** This course is structured as an “active learning” experience. Therefore, all students are expected to attend classes, actively contribute to class discussions, take quizzes, complete hands-on and weekly assignments, and contribute to overall class learning by their research projects. Students are expected to search for, read, analyze, and share relevant current articles in the Wall Street Journal and other journals, newspapers, or Internet sources, and are also expected use these resources to actively contribute to classroom discussions. [25%]
2. **Case/Independent Research Projects:** Students will be assigned 1-2 monthly case studies / research projects, and will participate actively in the sharing of new information to advance the entire class's learning. Each student will present their projects throughout the semester. (PowerPoint presentation and a brief written report will be done for each case). Students are responsible for reading, understanding, and participating in ALL of the case study discussions, not merely those they present. [40%]
3. **Final Exam or Term Project:** Either a comprehensive exam will be given or a term project will be assigned.[15%]
4. **Term Paper:** Each student will write an individual research paper on an agreed-up relevant topic. [20%]

Applicable Policies:

Attendance Policy: You can earn participation points by attending the class and actively participating in class discussions. Any unexcused absence will lower your participation score. Your absence is considered ‘excused’ only if your absence is work-related or unavoidable due to an emergency, and if the instructor is notified in advance. If your absence is excused, excessive absences will cause participation point deductions. Regardless of excuses, for each absence the student is solely responsible for obtaining copies of discussion and lecture notes from classmates.

Make-up Exam Policy: If you have to miss an exam or a quiz due to an excusable reason, you must arrange to take the exam beforehand. Otherwise, you will have to take the make-up exam or quiz, which may be given along with an oral test, within a week, or at the instructor's discretion.

Late Submission Policy: Any work submitted after the deadline will lose 10 percent of its full credit per day.

Disability Fairness Policy: It is the policy of Villanova to make reasonable academic accommodations for qualified individuals with disabilities. If you are a person with a disability, please contact me after class of during office hours and make arrangements to register with the Learning Support Office by contacting 610-519-5636 or nancy.mott@villanova.edu as soon as possible. Registration is needed in order to receive accommodations.

Academic Integrity Policy: The Code of Academic Integrity of Villanova University addresses cheating, fabrication of submitted work, plagiarism, handing in work completed for another course without the instructor's approval, and other forms of dishonesty. For the first offense, a student who violates the Code of Villanova University will receive 0 points for the assignment. The violation will be reported by the instructor to the Dean's office and recorded in the student's file. In addition, the student will be expected to complete an education program. For the second offense, the student will be dismissed from the University and the reason noted on the student's official transcript.