

COURSE SYLLABUS

HIM 6685 Electronic Health Records and Clinical Support Systems

GENERAL INFORMATION

PROFESSOR INFORMATION

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COURSE DESCRIPTION

This course explores the central role of electronic health record (EHR) systems in today's health care practices. Due to the complex integration of the EHR across so many of the fundamental operations of a provider's practice, the course will cover a wide array of topics and will involve readings from a number of current documents that apply to EHRs. The course is intentionally broad to provide a comprehensive perspective on the integration of EHRs into American health care.

The course will be presented in three general subject areas. The first area will examine the fundamental mechanics of an EHR, how it fits into the provider's practice and how it supports the management and retrieval of clinical information. The second section will take a broader perspective on how the EHR fits into a health care regulatory and technical setting. This section will look at government policies and programs driving EHR adoption, then cover issues of interoperability between EHRs for the coordination of care and the important concerns of privacy and security. The last section will cover the use of clinical data held in the EHR for analytics and for evaluating health outcomes.

The class will start with a functional discussion the EHR, distinguishing the practice management system from the clinical repository and introducing the concepts of EHR usability and user satisfaction. The discussion will then move to implementing EHRs in an ambulatory provider's practice, and will cover EHR implementation planning and change management, changing from a paper to an electronic environment, the assessment of workflow issues and clinical versus administrative training needs. Next on the agenda are the health information management standards embedded in EHRs, which include ICD-9, ICD-10 and CPT4 coding, e-prescribing based on NCPDP standards and standardized vocabularies such as LOINC and SNOMED CT.

The next area to be covered will begin with important Government regulatory policies that drive the adoption of EHRs; this will include the requirements for certification of EHRs, Meaningful Use and the EHR Incentive

Program. The discussion will then cover the important issue of Interoperability of EHRs using health information exchange, direct secure messaging and personal health records. The discussion will also include interoperable data standards such as the continuity of care record (CCR) and the continuity of care document (CCD) and various transmission standards such as HL7 and XML. The course will then introduce privacy and security of EHRs, covering the HIPAA Security Rule, Risk Assessment and the NIST Risk Framework.

The last section of the class will examine the use of clinical data from the EHR for analytical purposes, such as revenue cycle management and population health. It will then discuss health outcomes related to using EHRs such as the reduction of medical errors and ensuring quality health outcomes. At the end of the class, participants should have a comprehensive view of the central role of EHRs in the transformation of health care today.

COURSE OBJECTIVES

After completing this course, students will be able to

- Evaluate the usability and functionality of an EHR and Practice Management system for a physician practice, assess the office workflow and develop a strategic plan for implementing the EHR and training the office staff.
- Assist a physician practice in attesting for Meaningful Use and reporting Clinical Quality Measures under the Physician Quality Reporting System.
- Explain federal government policies and programs that promote and incentivize the adoption of EHRs to a lay person with no knowledge of health care.
- Identify the different requirements for interoperability using health information exchange and the different standards for transmitting documents between EHRs.
- Understand the requirements for maintaining the security and confidentiality of protected health information based on HIPAA regulations and be able to conduct a risk assessment in a physician practice.
- Identify standards for coding diagnoses, procedures and vocabularies for semantic interoperability of EHRs.
- Explain the basics of revenue cycle management to help a physician or office manager understand how the use of an EHR can improve the revenue flow in a physician practice.
- Understand and use the clinical data collected by an EHR for public health reporting and health care analytics to evaluate health outcomes.

MAJOR & CURRICULUM OBJECTIVES TARGETED

Learning Objectives: Upon completion of the course, the student should have an understanding of the central role of electronic health records in modern health care. This will include:

- The anatomy and usability of EHRs and Practice Management Systems.
- Implementation of EHRs including the analysis of workflow issues, change management and training.
- Federal government policies and regulations regarding the certification and adoption of EHRs.
- Interoperability of EHRs via HIE, Direct Secure Messaging and personal health records using interoperable data standards such as the CCR and the CCD and transmission standards such as HL7, XML and continuity of care documentation.
- Privacy and Security requirements based on the HIPAA Security Rule and comprising the NIST Risk Framework and Risk Assessment.
- Health Information Management standards in EHRs such as ICD-9 and ICD-10 coding and standard vocabularies such as LOINC and SNOMED CT.

- Health care analytics including revenue cycle management and population health.
- The use of clinical data to track health outcomes and the reduction of medical errors.

TEACHING METHODOLOGY

HIM 6685 Electronic Health Records and Clinical Support Systems addresses the introduction of electronic health record systems (EHRs) into the health care system and the complex relationships that integrate them with many other aspects of the provider's practice.

The instructor's approach to the course will be to 1) integrate technical lectures that cover information relevant to the discussion of EHRs with 2) in-class discussions and student-based presentations that demonstrate mastery of terminology and concepts and 3) written papers that allow students to explore related forces that impact the integration of EHRs with physician practices, such as Meaningful Use, federal standards and policies, technical advances and the development of health information exchange activities.

The instructor intends to split the class time among lectures, promoting in-class discussion on course-relevant information and concepts and student presentations on assignments and research projects. Students are expected to come to class fully prepared to engage in class discussions, make assigned presentations and assist class members in understanding class content. The instructor's approach will be highly interactive and is intended to promote articulate dialogue on the implications of introducing EHRs into the health care system. The class will draw heavily upon the professional experiences of both the students and the instructor.

It is the intent of the instructor to provide several professional EHR products for students to use for general assessment purposes. In-class presentations will be linked to these EHR applications and will offer students the opportunity to compare the functionality and certification compliance of several EHR applications.

ASSURANCE OF LEARNING

The College of Business cares about the quality of your education. More on the College's commitment to Assurance of Learning can be found at the following link:

http://businessonline.fiu.edu/course_addons/Learning_Commitment.pdf

POLICIES

Please review the policies page as it contains essential information regarding guidelines relevant to all courses at FIU and additional information on the standards for acceptable netiquette important for online courses.

TECHNICAL REQUIREMENTS/SKILLS

One of the greatest barriers to taking an online course is a lack of basic computer literacy. By computer literacy we mean being able to manage and organize computer files efficiently, and learning to use your computer's operating system and software quickly and easily. Keep in mind that this is not a computer literacy course; but students enrolled in online courses are expected to have moderate proficiency using a computer. Please go to the "[What's Required](#)" page to find out more information on this subject.

This course utilizes the following Blackboard tools as complements to the in-class discussions:

1. Discussion Forum
2. Content Tool
3. Email and Blackboard Messages

For detailed information about the technical requirements, please [click here](#).

ACCESSIBILITY AND ACCOMODATION

For detailed information about the specific limitations with the technologies used in this course, please visit <http://online.fiu.edu/app/webroot/html/blackboardlearn/mastertemplate/accessibility/>.

For more information about Blackboard's Accessibility Commitment, please visit <http://www.blackboard.com/Platforms/Learn/Resources/Accessibility.aspx>.

For additional assistance please contact our <http://drc.fiu.edu/>.

COURSE PREREQUISITES

There are no course prerequisites for this course.

TEXTBOOK

The texts in this course are gathered from recent documents related to the class discussions available from credible sources such as the *Office of the National Coordinator for Health IT (ONC)*, the *Centers for Medicare and Medicaid Services (CMS)*, the *Health Information Management Systems Society (HIMSS)*, the *American Health Information Management Society (AHIMA)* and other sources.

All course documents will be provided electronically to reduce the cost of purchasing an expensive textbook. A list of course documents for each week of instruction will be provided in Blackboard before the start of class and to each student on the day of class.

An example of the text resources provided to the class is given below:

Technical Evaluation, Testing, and Validation of the Usability of Electronic Health Records

Svetlana Z. Lowry, Matthew T. Quinn, Mala Ramaiah, Robert M. Schumacher, Emily S. Patterson, Robert North, Jiajie Zhang, Michael C. Gibbons and Patricia Abbott

National Institute of Standards and Technology

February 2012

http://www.nist.gov/healthcare/usability/upload/EUP_WERB_Version_2_23_12-Final-2.pdf

EXPECTATIONS OF THIS COURSE

This is a classroom course with the capability to use Blackboard for online discussion and instruction. Expectations for student performance online are the same as for the classroom days. The online discussion forums allow for an exchange of ideas between students and instructor based on a written dialogue on specific topics. The online Blackboard aspect of the course requires a degree of self-motivation, self-discipline, and technology skills that can make it somewhat more demanding than the in class meetings but rewarding at the same time.

Students are expected to:

- Review the how-to-get-started information located in the course content.
- Ensure that your computer is compatible with Blackboard.
- Interact online with instructor/s and peers.
- Log in to the course regularly over the course of the eight weeks.
- Respond to discussion boards, blogs and journal postings within the week.
- Respond to emails within a reasonable timeframe.
- Submit assignments by the corresponding deadline.

The instructor will:

- Log in to the course regularly.
- Respond to discussion boards, blogs and journal postings daily.
- Respond to emails within 48 hours.
- Grade assignments within two weeks of the assignment deadline.

COURSE COMMUNICATION

Communication in this course will take place via interpersonal contact, email and Blackboard messages.

Messages are a private and secure text-based communication that occurs within a Course and among Course members. Users must log on to Blackboard to send/receive/read messages. The Messages tool is located on the left side Course Menu (Blackboard user interface). It is recommended that students check their messages routinely to ensure up-to-date communication.

The Email feature is an external communication tool that allows users to send emails to users enrolled within the course including the instructor and other students. Emails are sent to the students' FIU email on record. The Email tool is located on the left side Course Menu (Blackboard user interface).

For more information on professional writing and technical communication visit this link:

http://online.fiu.edu/app/webroot/html/blackboardlearn/resources/writing_resources/.

ASSIGNMENTS**The Instructor will provide clear guidelines for each assignment**

There will be three types of assignments in this course: Individual in-class presentations, Group in-class presentations Research Papers. The online discussion forum will be used for class interaction between Saturday sessions.

- *In-class presentations will address information covered in each chapter of the class text book with additional outside research on health information technology applications. Presentations can be individual or group, as preferred.*
- *The online forums will be used to provide a forum for students to research the usability and functionality of the EHRs that they are working with.*
- *Specifications for papers will be distributed at least two weeks before the paper is due. All papers will be evaluated within two weeks of the due date.*

DISCUSSION FORUMS

Keep in mind that forum discussions are public, and care should be taken when determining what to post.

Instructor

Instructor will provide clear guidance on the expectations and requirements of assignments.

- Students will receive specifications for in-class presentations during the first day of class. Specifications will include expected breadth of topic, depth of content and grading criteria.
- Students will be evaluated on the extent and quality of their classroom discussions.
- Online discussion topics will be communicated one week ahead of the online discussion. Students will be evaluated on the number of entries they post in the discussion forum and on the quality of their posts. Minimum expectations are for three posts within the week.
- Specifications for research papers will be distributed two weeks before papers are due. Online discussion topics will be selected that feed into the research papers and give students a chance to discuss the research topic and gather background materials. Criteria for evaluating the papers will be included in the specification sheets.

WEEKLY SCHEDULE

All classes will be held at the FIU Brickell Campus

Class Date	Class Discussion	Class Assignment
Week 1 Saturday, May 10, 2014	Anatomy and Usability of an EHR	Introduction to course content and student expectations. Student introductions. Introduction to practice EHRs to be used by the class.
Week 2 Saturday, May 17, 2014	Implementation of EHR and Workflow Assessment	Individual report on EHR Usability and Satisfaction Survey in each student's workplace based on a survey conducted between Week 1 and Week 2. Selection of Course EHR
Week 3 Saturday, May 24, 2014	Government Policy and Regulation	Group PowerPoint presentations on selected federal policies and regulations with reference to EHRs
Week 4 Saturday, May 31, 2014	Interoperability	Individual paper on the effect of federal regulations on the health IT implementation of the student's workplace.
Week 5 Saturday, June 7, 2014	Privacy and Security	Group PowerPoint presentations on methods of health information exchange and actual HIE in the students' workplace.
Week 6 Saturday, June 14, 2014	Health Information Management Standards in EHRs	Individual report on the Privacy and Security compliance in each student's workplace based on short risk assessment.
Week 7 Saturday, June 21, 2014	Population Health and Revenue Cycle Management	Group PowerPoint presentations on standards for HIM coding used in EHRs
Week 8 Saturday, June 28, 2014	Analytics for Health Outcomes	Individual paper on the future of health IT and its continuing influence on the quality and coordination of care in the health care system with reference to selected EHR.

GRADING

Assignments will be evaluated according to the weights given below:

	Number	Per Unit	Total	Cumulative
<i>In-Class Individual Report</i>	2	15%	30%	15%
<i>Research Papers</i>	2	15%	30%	60%
<i>In-Class Group Report</i>	3	10%	30%	90%
<i>Online Discussion</i>	<i>Ongoing</i>	10%	10%	100%
		Total	100%	

Grades will be assigned according to the percentage totals given below:

Letter Grade	Range
A	93% - 100%
A-	91% - 92%
B+	87% - 90%
B	84% - 86%
B-	81% - 83%
C+	77% - 80%
C	74% - 76%
C-	71% - 73%
D+	67% - 70%
D	64% - 66%
D-	61% - 63%
F	Less than 61%