Summer 2019

Course: HI161 Computers in Health Information

Credit: 4 Quarter Hours
Method of Delivery: Day Flex (DF)

Course Description: Computerized health information systems will be introduced in this course including definitions, electronic data collection, storage, and retrieval, as well as how to implement, manage, and secure computer-based patient record systems. In addition, computer voice technology will be introduced. Course fees may apply.
Prerequisite: CIS114

Text(s) & Manual(s): Introduction to Information Systems for Health Information Technology, Third Edition
ISBN: 978-1-58426-626-6
Author(s): Nanette Sayles and Lauralyn Kavanaugh-Burke
Publisher: AHIMA Press

Materials needed for this course:
   Additional Supplies: None
   Hardware/Software and Equipment: Subscription to AHIMA Virtual Lab

Topics:

1.   Introduction to Computers in Health Information Management
2.   Information Integrity and Data Quality
3.   Databases
4.   System Selection
5.   System Implementation
6.   Computers in HIM
7.   Administrative Information Systems
8.   Clinical Information Systems
9.   Electronic Health Record
10. Consumer Informatics
11. Health Information Exchange
12. Standards
13. Security
14. Information and Data Governance
15. Role of HIM Professionals in Information Systems

Learning Objectives: Upon completion of this course, the student will be able to:
1. Utilize software in the completion of Health Information Management processes.
2. Apply policies and procedures to ensure the accuracy and integrity of health data both internal and external to the health system.
3. Apply knowledge of database architecture and design.
4. Utilize technology for data collection, storage, analysis, and reporting of information.
5. Evaluate administrative reports using appropriate software.

AHIMA Entry-Level Competencies (2014)

Associate Competencies	Baccalaureate Competencies	Assessment Item
I.B.2. Verify the documentation in the health record is timely, complete, and accurate.		Week 5 - MEDITECH Deficiency Analysis and MEDITECH Delinquency Reporting
II.B.3. Apply system security policies according to departmental and organizational data/information standards.		Week 9 - Chapter 12 – Identify different types of data and information used in the HIM department. Discuss the type of security policies that are necessary for each.
III.A.1. Utilize software in the completion of HIM processes.		Week 5 - MEDITECH Deficiency Analysis and MEDITECH Delinquency Reporting
III.A.2. Explain policies and procedures of networks, including intranet and Internet to facilitate clinical and administrative applications.		Week 7 - Create a policy for communication with patients via a patient portal. Be sure to address incorporation of messages sent and received in the portal into the EHR and what patient generated health information from a PHR should be incorporated into the EHR.

III.H.1. Apply policies and procedures to ensure the accuracy and integrity of health data both internal and external to the health system.		Week 8 - Identify potential threats to an EHR and HIE and provide suggestions of how to combat them (intrusion detection systems, etc.). Week 7 - Create a policy to ensure data integrity internal and external to the enterprise. Be sure to address issues such as authentication, encryption, password management, and data collection.
VI.K.1. Apply knowledge of database architecture and design.		Week 3 - Access Project
	II.B.3. Collaborate in the design and implementation of risk assessment, contingency planning, and data recovery procedures.	Week 9 - Write a policy that addresses information system backup and would justify compliance with element 4 of Joint Commission Standard IM.01.01.03. Include risk assessment, contingency planning, and data recovery.
	II.B.4. Analyze the security and privacy implications of mobile health technologies.	Week 9 - Using APA format, write a 1-2 page essay that will outline potential security threats of maintaining health information utilizing mobile devices and addresses methods to ensure security and integrity of information.
	II.C.2. Protect electronic health information through confidentiality and security measures, policies, and procedures.	Week 5 Competency Assignment – Create a policy for protection of health information through confidentiality and security measures that addresses audit techniques.
	III.A.1. Utilize technology for data collection, storage, analysis, and reporting of information.	Week 1 – EDCO Solcom EDMS Virtual Lab assignment. Following completion of these exercises, write an essay to discuss cloud computing applications and how they may be applied in the HIM environment.
	III.A.2. Assess systems capabilities to meet regulatory requirements.	Week 7 - Chapter 13 - Create a policy to address the use of electronic signatures in a healthcare setting.

	III.A.3. Recommend device selection based on workflow, ergonomic, and human factors.	Week 11 – Write a paragraph to discuss the most appropriate scenarios when the following electronic devices should be used and why: PC, tablet, mobile phone, or PDA.
	III.A.4. Take part in the development of networks, including intranet and Internet applications.	Week1 - Chapter 1 – Write an essay to compare and contrast the use of Internet, web-based, and VPN provision of resources to be used in a healthcare setting.
	III.A.5. Evaluate system architecture, database design, data warehousing.	Week 9 - Write a procedure for system testing to evaluate the effectiveness of interfaces and redundant systems.
	III.A.6. Create the electronic structure of health data to meet a variety of end user needs.	Week 3 - Access Project
	III.C.3. Recommend organizational action based on knowledge obtained from data exploration and mining.	Week 3 Discussion - Find a journal article about the use of data mining in healthcare. Write at least one paragraph to summarize the article and at least one paragraph to discuss how you might apply knowledge acquired in this course and others in order to use the information presented in the article as a health information management professional. Develop recommendations that you might suggest to the author of the article regarding how data mining activities could be expanded or improved.
	III.C.5. Apply knowledge of database querying and data exploration and mining techniques to facilitate information retrieval.	Weeks 3 & 10 - Virtual Lab Tableau Data Mining actvities

	III.C.6. Evaluate administrative reports using appropriate software.	Week 3 - Access Project
	III.G.2. Conduct system testing to ensure data integrity and quality of health information exchange.	Week 9- Write a procedure for system testing to evaluate the effectiveness of interfaces and redundant systems.
	III.G.3. Differentiate between various models for health information exchange.	Week 8 - Chapter 11 - Using APA format, write a 1-2 page essay that will compare and contrast RHIO versus HIE models of Health Information Exchange.
	III.H.1. Discover threats to data integrity and validity.	Week 8 – Write a paragraph that will identify potential threats to an EHR and HIE and provide suggestions of how to combat them (intrusion detection systems, etc.).
	III.H.2. Implement policies and procedures to ensure data integrity internal and external.	Week 7 - Create a policy to ensure data integrity internal and external to the enterprise. Be sure to address issues such as authentication, encryption, password management, and data collection.
	III.H.5. Model policy initiatives that influence data integrity.	Week 7 - Create a policy to ensure data integrity internal and external to the enterprise. Be sure to address issues such as authentication, encryption, password management, and data collection.
	VI.A.1. Take part in effective negotiating and use influencing skills.	Week 11 - PowerPoint Assignment – Be prepared to answer questions from your instructor related to the information you present and negotiate about EHR implementation.
	VI.G.3. Evaluate the stages of the procurement process.	Week 4 - Chapter 4 - You are the Director of HIM for a clinic that is planning to implement an EHR system. Discuss the steps you will go through for procuring the system

		and find examples of software and systems online. Evaluate the options that you find and discuss why you would select what you determine to be the best product.

Midstate Grading scale:
 90 - 100   A
 80 - 89   B
 70 - 79   C
 60 - 69   D
  0 - 59   F

Academic Integrity:

Academic integrity is a basic principle of the College's function. Midstate College students are expected to maintain a high level of academic honesty. Contrary actions may result in penalties such as failure of the assignment(s), a lesser grade on assignment(s), failure of the course and/or suspension from the College. The course instructor will review all submitted documents and supporting evidence in connection to the infraction. The course instructor will also review the student's personal file for other notifications of academic dishonesty before determining the level of action to be applied. The course instructor will complete the Academic Dishonesty Report form to document and describe the incident and actions taken, then kept on file. The student may appeal the decision to administration, whose decision will be final.

The following (**plagiarism, cheating, deception, sabotage, computer misuse and copyright infringement**) are included in the actions Midstate College considers behavior contrary to the academic integrity policy; however, the policy is not limited to these examples. Further discussion of consequences regarding academic dishonesty are addressed in the Student Handbook.

Plagiarism:

Plagiarism is using another person's words, either by paraphrase or direct quotation, without giving credit to the author(s). Plagiarism can also consist of cutting and pasting material from electronic sources by submitting all or a portion of work for assignment credit. This includes papers, computer programs, music, sculptures, paintings, photographs, etc. authored by another person without explicitly citing the original source(s). These actions violate the trust and honesty expected in academic work. Plagiarism is strictly against the academic policy of

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Midstate College. Its seriousness requires a measured, forceful response which includes consequences for inappropriate and/or no citation.

In courses containing writing assignments, the College promotes the use of Turnitin which compares the student's writing against previously submitted papers, journals, periodicals, books, and web pages. Students and instructors can use this service to reduce the incidence of plagiarism. This electronic resource has been found to conform to legal requirements for fair use and student confidentiality. It is able to provide a report to the student indicating the parts of the assignment that match.

Student Success and Tutoring:

Contact Student Success: Room 110; (309) 692-4092, ext. 1100; studentsuccess@midstate.edu;

The Office of Student Success offers help in the following areas:
- Tutoring: Tutoring is encouraged for students who are doing their best to complete assignments yet still are experiencing difficulty in this course. Tutoring may be provided by the instructor outside of scheduled class times or through the office of Student Success.
- Writing assignment assistance: This may include learning how to conduct research; using proofreading tools such as Turnitin; outlining a topic; and applying MLA/APA standards.
- Math, accounting, and computer skills (including file management).
- Test-taking techniques.
- Note-taking skills development.
- Study skills development.
- Time management.

Instructor: Carol Fremaux, RHIA   **Room/phone:** 236/309-692-4092
Midstate email: csfremaux@midstate.edu   **Office Hour(s):** Posted on website

Policies and Procedures:

1. This course is being administered as flex learning. The schedule will state what day and time the classroom component will be, as it would be with a regular classroom course, while eLearning is available at all times. If you plan to attend in the classroom, please let the instructor know at least one day prior to the date of the classroom meeting time so that an adequate number of classroom materials can be printed.

Flex courses are taught both on-campus and through eLearning. Flex courses offer personalized learning where students can choose each week whether they want to attend on-campus, via eLearning, or both.

- On-campus = If a student attends an on-campus course, he or she will be counted as present.
- eLearning = To be considered in attendance for an eLearning course, the student must participate each week by submitting substantial, gradable work.

2. All work is to be submitted on time unless unusual circumstances occur. If you miss class, you are expected to use your course outline to determine what you missed. You will have seven days to make arrangements to make up the missed work without penalty. The grade will drop 10% for each week you delay in completing material following the seven day grace period. Late work will NOT be accepted without prior approval from the instructor. This includes homework and quizzes.
3. All work must be in APA format, including in-text citations and a reference page. Any time you are citing a fact or concept that was not your own work, you must cite the source.
4. If you attend the classroom component, you are expected to be on time. If you must arrive late, or leave early during class, please let the instructor know ahead of time and enter and leave the classroom quietly to avoid disturbing others.
5. Academic dishonesty is never tolerated and will be referred to the Dean.
6. If you are in the classroom, cell phone ringers must be silenced and absolutely no texting or taking calls will be allowed during class.
7. The final exam must be completed. Failure to do so will result in failure of the course.
8. In order to maintain equal work in both online and classroom components of this course, all students, both classroom and eLearning, must complete weekly reflections.
9. Attendance is expected, not suggested. Class is like having a job. Excessive absence will hurt your performance and your ability to pass this class. Excessive absence is 3 or more weeks of online classes.
10. Academic integrity is important at Midstate College, as stated in the catalog and student handbook. This not only includes prevention of cheating on exams and written research papers, but also discussion forum postings. Discussion postings must be in your own words and references must be cited.
11. The policy for eLearning is that course materials are available to students at noon each Monday and that students have until 7:59 a.m. Monday morning to complete the previous week's material. However, students are advised against waiting until the last minute or last day to submit their work for a variety of reasons. If you work on your eLearning course early in the week and experience computer problems, you have more time to find an alternate computer. Also, the discussion forums can be very beneficial learning tools in eLearning if utilized to their greatest potential. It is difficult to have an effective and meaningful "discussion" if nobody posts until the last minute.

Participation Requirements:
1. If you are attending the course via eLearning, discussion responses must be posted by Sunday night at the end of the week. In order to receive full credit for online discussion, you must also respond to at least one other student in a meaningful manner with either a value-added comment or an insightful question about the posting of your classmate. Students attending in the classroom must come prepared to discuss the assigned question and must actively participate in discussion in the classroom in order to receive full credit.

Examination Information: A pretest is administered during week 1. The pretest is for assessment purposes only and is not included in the final grade. There will be weekly quizzes and a final exam in week 12. The final exam is comprehensive in nature

Methods of evaluating student performance:
All assignments, projects, quizzes, assessment items, and the final examination must be completed. If all required elements are not done, the student will not pass this course. A course average grade of C or better is required to be considered passing for this course.

Instructor's Grading Scale:
Discussions   25%
Weekly Reflections 20%
Assignments   25%
Quizzes & Final Exam 30%
Total   100%

WEEKLY REFLECTION GRADING GUIDELINES	
• Two complete paragraphs with supporting evidence = 40 points • One paragraph with supporting evidence or two minimal paragraphs without supporting evidence = 20 points • Answers the minimal requirements of the question without supporting evidence = 10 points • No posting = no points	40 points
Correct spelling in postings for the week • No spelling errors = 30 points • 1 misspelled word = 20 points • 2-3 misspelled words = 10 point • More than 3 misspelled words = 0 points	30 points
Correct grammar in postings for the week • No grammar/mechanical errors = 30 points • 1 grammar/mechanical error = 20 points • 2-3 grammar/mechanical errors = 10 points • More than 3 misspelled words = 0 points	30 points
Total points per weekly discussion	100 points

CLASSROOM DISCUSSION QUESTION GRADING GUIDELINES	
Initial posting • Answers minimal requirements of question without supporting evidence = 10 points • Minimal response with supporting evidence = 20 points • Complete response with supporting evidence = 40 points	40 points
Response to a classmate • Simple response lacking insight or adding value = 20 points • Insightful response adding value to the initial response = 40 points	40 points
Correct spelling and grammar in postings for the week • Professional and respectful response = 20 points • Unprofessional or disrespectful response = 0 points	20 points
Total points per weekly discussion	100 points
ELEARNING DISCUSSION QUESTION GRADING GUIDELINES	
Initial posting • Answers the minimal requirements of the question without supporting evidence = 10 point • Minimal posting with supporting evidence = 20 points • Complete posting with supporting evidence = 30 points	30 points
Response to posting of a classmate • Posting the minimal requirements without supporting evidence = 10 points • Minimal posting with supporting evidence = 20 points • Complete posting with supporting evidence = 30 points	30 points
Correct spelling in postings for the week • No spelling errors = 20 points • One or two spelling errors = 10 points • More than two spelling errors = 0 points	20 points
Correct grammar in postings for the week • No grammar errors = 20 points • One or two grammar errors = 10 points • More than two grammar errors = 0 points	20 points
Total points per weekly discussion	100 points

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WEEKLY REFLECTION GRADING GUIDELINES	
• Two complete paragraphs with supporting evidence = 40 points • One paragraph with supporting evidence or two minimal paragraphs without supporting evidence = 20 points • Answers the minimal requirements of the question without supporting evidence = 10 points • No posting = no points	40 points
Correct spelling in postings for the week • No spelling errors = 30 points • 1 misspelled word = 20 points • 2-3 misspelled words = 10 point • More than 3 misspelled words = 0 points	30 points
Correct grammar in postings for the week • No grammar/mechanical errors = 30 points • 1 grammar/mechanical error = 20 points • 2-3 grammar/mechanical errors = 10 points • More than 3 misspelled words = 0 points	30 points
Total points per weekly discussion	100 points

WRITING ASSIGNMENT GRADING GUIDELINES			
	-20	**-10**	**-0**
Introduction	Does not state objectives clearly	States objectives clearly, plus includes thesis statement	Also includes necessary info for reader's understanding of topic
Paragraph Development	Paragraphs are not well developed, not using minimum number of sentences nor complex sentences	Paragraphs are somewhat developed, using simple sentences, and with the minimum number of sentences	Paragraphs are fully developed, using multiple, complex and compound sentences
Content	Does not cover content appropriately	Major areas of content are included, but lacking sufficient detail	All pertinent content is covered
Mechanics (this includes APA formatting)	More than 3 errors	Between 1-3 errors	No errors
Spelling	More than 3 misspelled words	Between 1-3 misspelled words	No misspelled words

Course Outline

Week	Chapter	Application Assignments
1	Introduction to Computers in Health Information Management	• Excel spreadsheet to track grades • PHR brochure • Getting Started in EDCO Solcom EDMS • Navigating the EDMS: Scavenger Hunt
2	Information Integrity and Data Quality	• Enterprise Master Patient Index Operations - ARGO • Functions of Entity Match & Resolution - ARGO
3	Databases	• Database assignment • Data dictionary assignment • Tableau Data Mining and Analysis
4	System Selection System Implementation	• VistA Simulation Activity
5	Computers in HIM	• Deficiency Analysis - MEDITECH • Delinquency Reporting - MEDITECH • CIOX Health ROI – Tracking ROI Requests • CIOX Health ROI – Evaluating ROI Requests
6	Administrative Information Systems Clinical Information Systems	• Registering a Patient – ARGO • Account Access and Setup - ARGO
7	Electronic Health Record	
8	Consumer Informatics Health Information Exchange	
9	Standards Security	
10	Information and Data Governance	• Tableau Acquiring Data from Online Resources
11	Role of HIM Professionals in Information Systems	• PowerPoint assignment
12	Final Exam	• Submit excel grade spreadsheet

Week 1:
Topic: Introduction to Computers in Health Information Management
Objectives:
1. Identify the impact of computers in healthcare in all areas within a facility;
2. Discuss the history of computers in healthcare;
3. Compare and contrast the similarities and differences among the Internet, Intranet and Extranet as used in healthcare;
4. Use Microsoft Word to create documents;
5. Use Microsoft Excel to create document with calculations;
6. Explore the AHIMA Virtual Lab electronic health record system;
7. Describe the functions of the basic components of the personal computer to include hardware, software, networks, and Internet technologies.

Assignments:
1. Complete the pretest.
2. Listen to the recorded lecture.
3. **Read:** Chapter 1.
4. **Discussion 1:** Research what is currently available in personal computer options. Discuss details of what your dream computer would include and justify why you would want various options.
5. **Discussion 2:** This week will also have a second discussion post that shall consist of two paragraphs. The first paragraph will simply be an introduction of yourself. Share why you selected Health Information Technology as a major. The second paragraph should address backup plans. Since this class may be taken online, it is important to have access to a reliable computer. What is your backup plan in case you experience computer or internet access problems? It is good to have more than one alternative in case you may need it.
6. **Homework:**
   a. Use Microsoft Excel to create a spreadsheet, complete with formulas, to track and compute your grade throughout the quarter. Submit the spreadsheet to the assignment drop box then use it to track your grades over the quarter. This file will be submitted again at the end of the quarter in Week 12.
   b. Use either Microsoft Word or Microsoft Publisher to create a one-page, trifold brochure for the general public to provide information about creating and maintaining a personal health record. Include citation of your references somewhere on the document. Resources you may want to consider using include the AHIMA website, myPHR.com, or textbooks from other courses.
   c. Write an essay to compare and contrast the use of Internet, web-based, and VPN provision of resources to be used in a healthcare setting.
   d. Complete the following AHIMA Virtual Lab assignments: Getting Started in EDCO Solcom EDMS and Navigating the EDMS: Scavenger Hunt. Following completion of these exercises, write an essay to discuss cloud computing applications and how they may be applied in the HIM environment.

7. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.
8. **Quiz:** Complete the Week 1 quiz.

Week 2:
   Topics: Information Integrity and Data Quality
   Objectives:
   1. Identify the various data sources that populate the electronic health record;
   2. Choose the appropriate field type for a data element.
   Assignments:
   1. **Listen** to the recorded lecture.
   2. **Read:** Chapter 2.
   3. **Discussion 1:** Why is the quality of data so important in healthcare? What can be the consequences of poor documentation?
   4. **Discussion 2:** There are a variety of products that currently use some form of voice recognition, including smart phones and personal computer programs. Try using voice recognition and discuss your experience. Did you experience any problems with your exact words not being accurately captured? Do you think that transcriptionists working as editors for providers using voice recognition is more efficient than the transcriptionists typing the entire report? Why or why not?
   5. **Homework:**
      a. AHIMA Virtual Lab: Enterprise Master Patient Index (EMPI) Operations - ARGO
      b. Search for at least two articles about voice recognition and summarize your findings completing one paragraph for each article. Remember to cite the source of your articles.
   5. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 3:
   Topics: Databases
   Objectives:
   1. Identify the primary key contained in an entity;

2. Differentiate between a data repository and data warehouse;
3. Utilize Microsoft Access to create a database to collect patient data;
4. Utilize Microsoft Access to design screens for entering patient information;
5. Generate reports utilizing Microsoft Access.

Assignments:
1. Listen to the recorded lecture.
2. **Read:** Chapter 3.
3. **Discussion:** Find a journal article about the use of data mining in healthcare. Write at least one paragraph to summarize the article and at least one paragraph to discuss how you might apply knowledge acquired in this course and others in order to use the information presented in the article as a health information management professional. Develop recommendations that you might suggest to the author of the article regarding how data mining activities could be expanded or improved.
4. **Homework:** In this project, you will use Microsoft Access to create a database that will function similar to hospital scale software to perform data capture, data entry, and report generation. Another function that is performed by, or with the assistance of, Health Information Management professionals is screen design. Screen design for a computer program utilizes many of the similar concepts as designing a paper form. After a database has been created and populated, reports are run to pull specific information.
   a. Create the following tables with the items as specified:
      - Master Patient Index (MPI)
        o Medical Record Number (primary key)
        o Patient Last Name
        o Patient First Name
        o Patient Middle Name
        o Street Address
        o City
        o State (make drop-down menu with 2-digit state abbreviations for IL, IA, IN, and MO)
        o Zip Code
        o Phone Number
        o Date of Birth
        o Gender (drop-down menu with M & F options)
        o Social Security Number

      - Admissions, Discharges, Transfers (ADT)
        o Account Number (primary key)
        o Medical Record Number
        o Admission Date
        o Discharge Date

o   Visit Type (drop-down menu with OPD, OPS, OBV, MED, SUR, OBS, GYN, SNF)

b. After you have created these two tables, create two different forms, one for MPI and the other for ADT.
c. Enter the following data into the MPI form:

Last Name	First Name	Middle Name	Street Address	City	State	Zip Code	Phone Number	Date of Birth	Gender
Simpson	James	R	123 Adams St.	Anytown	IL	12345	123-456-7890	1/1/1969	Male
Jones	Sally	T	487 S. Main St.	Somewhere	IL	12354	123-958-3827	5/4/1967	Female
Smith	Frank	J	839 N. First St.	Downtown	IL	12845	123-583-5839	6/3/1972	Male
Gordon	Joseph	M	294 S. Fifth Ave	Smalltown	IN	23584	383-849-5738	8/23/1970	Male
Carson	Mary	L	279 E. Spring St.	Uptown	IL	12347	123-739-9573	9/15/1973	Female

d. Enter the following data into the ADT form:

Account Number	Medical Record Number	Admission Date	Discharge Date	Visit Type
234	1	5/1/2016	5/4/2016	MED
236	2	8/12/2016	8/14/2016	SUR
374	5	7/9/2014	7/9/2014	OPD
382	4	5/2/2017	5/2/2017	OBV
383	2	8/10/2016	8/14/2016	SUR
427	3	3/6/2015	3/6/2015	OPS
489	5	6/2/2016	6/5/2016	MED
829	5	1/4/2015	2/6/2015	SUR
938	3	6/20/2017	6/26/2017	MED
483	4	4/2/2016	4/6/2016	MED
847	1	10/5/2016	10/15/2016	SUR

e. Use the Query function to run a report of all patients with discharge dates in 2015.

      f.   Create a data dictionary for all MPI elements as well as ADT elements.
      g.   AHIMA Virtual Lab: Tableau – Data Mining and Analysis.

5. **Quiz:** Complete the week 3 quiz.
6. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 4:
Topics: System Selection and System Implementation
Objectives:
1. Identify the steps in both the system selection process and system implementation;
2. Assist in the review of the request for proposal.
Assignments:
1. Listen to the recorded lectures.
2. **Read:** Chapters 4 and 5.
3. **Discussion:** Explore different EHR products online. Discuss at least two different products, including why you may or may not recommend each. Justify your answers and cite your sources.
4. **Assignments:**
      a.   AHIMA Virtual Lab: VistA Simulation Activity.
      b.   Search online for a sample request for proposal and critique the document.
      c.   You are the Director of HIM for a clinic that is planning to implement an EHR system. Discuss the steps you will go through for procuring the system and find examples of software and systems online. Evaluate the options that you find and discuss why you would select what you determine to be the best product.
5. **Quiz:** Complete the week 4 quiz.
6. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 5:
Topics: Computers in HIM
Objectives:

1. Identify the information systems needed to support efficient operations in the health information management (HIM) department;
2. Differentiate between the various software products used in the HIM department;
3. Improve the quality of data within HIM systems;
4. Demonstrate how to enter a new encounter/note in the patient's chart.

Assignments:
1. Listen to the recorded lecture.
2. **Read:** Chapter 6.
3. **Discussion:** Contact a healthcare professional to interview about how EHR products are being used in their department. It does not have to be an HIM professional. Discuss your findings.
4. **Homework:**   AHIMA Virtual Lab:
   a. Deficiency Analysis – MEDITECH
   b. Delinquency Reporting – MEDITECH
   c. CIOX Health ROI – Tracking ROI Requests
   d. CIOX Health ROI – Evaluating ROI Requests
5. **Competency Assignment:** Create a policy for protection of health information through confidentiality and security measures that addresses audit techniques.

Quiz: Complete the week 5 quiz.

6. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 6:
   Topics: Administrative Information Systems and Clinical Information Systems
   Objectives:
1. Determine what administrative information system is needed for a particular task.
2. Differentiate between a decision support system and an executive information system.
3. Define clinical information system.
4. Determine what clinical information system is needed to meet the needs of the healthcare facility.

Assignments:
1. Listen to the recorded lecture.
2. **Read:** Chapters 7 and 8.
3. **Discussion:** Read the Healthcare Financial Management Association (HFMA) educational report, "Missed Opportunities: Your Strategy for Correct-and-Complete Chargemaster," and discuss the findings and recommendations.
4. **Homework:** AHIMA Virtual Lab

  a. Registering a Patient – ARGO
  b. Account Access and Setup - ARGO
5. **Quiz:** Complete the week 6 quiz.
6. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 7:
  Topics: Electronic Health Record
  Objectives:
  1. Support the need for and address issues related to the EHR;
  2. Identify the need for the multiple information systems to support the EHR;
  3. Explain the role of clinical vocabularies.
  Assignments:
  1. Listen to the recorded lecture.
  2. **Read:** Chapter 9.
  3. **Discussion:** Share experiences you have had or witnessed from either the patient or provider related to the EHR. What were the positive and negative aspects? How might the negative aspects of your EHR experience be overcome in the future?
  4. **Homework:**
     a. Create a policy to address the use of electronic signatures in a healthcare setting.
     b. Create a policy for communication with patients via a patient portal. Be sure to address incorporation of message sent and received in the portal into the EHR and what patient generated health information from a PHR should be incorporated in the EHR.
     c. Create a policy to ensure data integrity internal and external to the enterprise. Be sure to address issues such as authentication, encryption, password management, and data collection.
  5. **Quiz:** Complete the week 7 quiz.
  6. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding

anything that you are having difficulty understanding or any concerns that you have this week.

Week 8:

Topics: Consumer Informatics and Health Information Exchange

Objectives:
1. Explain consumer informatics;
2. Differentiate between the patient portal and a personal health record;
3. Describe the role and function of the health information organization (HIO) in the HIE efforts;
4. Compare and contrast the models and methods of HIE.

Assignments:
1. Listen to the recorded lectures.
2. **Read:** Chapters 10 and 11.
3. **Discussion:** Search for additional information regarding telehealth. Discuss the risks and benefits of using telemedicine. Justify your answers and be sure to cite your sources.
4. **Homework:**
   a. Using APA format, write a 1-2 page essay that will compare and contrast RHIO versus HIE models of health information exchange.
   b. Write a paragraph that will identify potential threats to an EHR and HIE and provide suggestions how to combat them (i.e. intrusion detection systems, etc.).
5. **Quiz:** Complete the Week 8 quiz.
6. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 9:

Topics: Standards and Security

Objectives:
1. Explain the necessity for standards in health information technology (HIT);
2. Compare and contrast data content standards, vocabulary standards, and messaging standards;
3. Discuss federal security regulations;
4. Develop policies and procedures on security practices.

Assignments:
1. Listen to the recorded lectures.
2. **Read:** Chapters 12 and 13.

3. **Discussion:** When most people hear the term, "hacker," when talking about electronic health records, they only consider the term as somebody breaching security in a negative manner. Search for information about hackers who work for positive purposes and discuss your findings. Remember to cite your sources.
4. **Homework:**
   a. Research the HITECH reporting of breaches and the guidance documents released by the Secretary of DHHS related to ARRA. Discuss your findings.
   b. Write policy that addresses information system backup and would justify compliance with element 4 of Joint Commission Standard IM.01.01.03. Include risk assessment, contingency planning, and data recovery.
   c. Using APA format, write a 1-2 page essay that will outline potential security threats of maintaining health information utilizing mobile devices and addresses methods to ensure security and integrity of information.
   d. Write a procedure for system testing to evaluate the effectiveness of interfaces and redundant systems.
   e. Identify different types of data and information used in the HIM department. Discuss the type of security policies that are necessary for each.
5. **Quiz:** Complete the week 9 quiz.
6. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 10:
   Topics: Information and Data Governance
   Objectives:
   1. Compare and contrast information governance (IG) with data governance (DG) and their relative significance;
   2. Explain the importance of enterprise information management (EIM) and why it has become essential.
   Assignments:
   1. Listen to the recorded lecture.
   2. **Read:** Chapter 14.
   3. **Discussion:** Research an article that describes metadata and then define the term in your own words. Remember to cite your source.
   4. **Homework:**
      a. AHIMA Virtual Lab: Acquiring Data from Online Resources - Tableau
   5. **Quiz:** Complete the week 10 quiz.

6. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 11:
    Topics: Role of HIM Professionals in Information Systems
    Objectives:
        1. Create a presentation using Microsoft PowerPoint;
        2. Describe the skills of HIM Professionals.

Assignments:
    1. Listen to the recorded lecture.
    2. **Read:** Chapter 15.
    3. **Discussion:** Explore the personal health record (PHR) options available online and create your own PHR. This will not be turned in, but rather you are creating it for your own personal use. Discuss the options you found and your opinions regarding how the PHR may impact the future of healthcare deliver.
    4. **Homework:**
        a. Assume that you are in the role of Director of Health Information Services in a 200-bed acute care facility. Prepare a PowerPoint to present to the class as if they are the administration and Board of Directors of the facility. The purpose of the presentation is to influence the decision of administration to adopt an electronic health record system. The presentation should provide information about electronic health records (EHR), explain the benefits as they may relate to your facility, and provide a proposed timeline for the migration path from assessment of the current status of all hard-copy records to complete implementation of an EHR. Be prepared to answer questions from your instructor, related to the information you present and negotiate about EHR implementation.

           The project is worth 100 points total. Each of the 25 topics listed below is worth up to four points and will be graded based on the following rubric:
                0 – Did not address topic at all
                1 – Mentioned briefly, but did not provide any detail
                2 – Information on PowerPoint slide but not discussed in presentation

3 – Minimal detail
4 – Topic thoroughly discussed

- National Healthcare Information Infrastructure (NHII)
- Comparison of type and content of health record (paper, electronic, computer-based, e-health-personal, web-based)
- Computer concepts (such as hardware components, operating systems, languages, software packages)
- Voice recognition technology
- Health information specialty systems (such as ROI, coding, registries)
- Document archival, retrieval, and imaging systems
- Maintenance and monitoring of data storage systems
- System architecture and design
- System acquisition and evaluation
- Data retrieval and maintenance
- Data integrity and security processes
- Functionality of EHR
- Clinical vocabularies and terminologies used in health information systems
- Apply information system policies and procedures required by national health information initiatives on the healthcare delivery system
- Legal and regulatory requirements
- User access logs to track access and disclosure of PHI
- Policies and procedures for use of networks, including intranet and Internet applications to facilitate the electronic health record (EHR), public health, and other administrative applications
- Migration path timeline
- Risk management, contingency planning, and data recovery procedures.
- Planning, design, selection, implementation, integration, testing, evaluation, and support for organization-wide information systems
- CCHIT requirements
- Comparison of at least two EHR products that you have researched
- Evaluation of current situation and assessment of institutional readiness
- Use of features in PowerPoint (backgrounds, transitions, etc.)
- Overall rating of student's use of PowerPoint for presentation

b. Write a paragraph to discuss the most appropriate scenarios when the following electronic devices should be used and why: PC, tablet, mobile phone or PDA

4. **Quiz:**   Complete the Week 11 quiz.

5. **Weekly Reflection:** Each student must submit a 2-3 paragraph report to the Weekly Reflection drop box. The report shall summarize the learning concepts from the material covered in the lecture and reading assignments. Please devote the last paragraph to two concepts that you found to be most personally important and/or

valuable from this week's course material. Also share information regarding anything that you are having difficulty understanding or any concerns that you have this week.

Week 12:
  Topics: Final Exam
      Assignments:
    1. Complete the final exam.
    2. Complete the course evaluation.
  Assignments:
    a. Submit your completed Excel spreadsheet, which you started during week 1, to the drop box.
    b. **Final Course Reflection:** Each student must submit a 2-3 paragraph report to the Final Course Reflection drop box. Devote one paragraph each to two concepts that you found to be most personally important and/or valuable from this quarter. In the third paragraph, please share information regarding what you liked best about the course, what you liked least about the course and any comments or suggestions for improvement.