

# Managing Healthcare Information Systems

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## Course Information:

HCA.780 – Managing Healthcare Information Systems, 3 cr.

This course is delivered in an online asynchronous environment. Students may review weekly lectures and course materials for the week beginning on Sunday of each week. Students will submit assignments and complete weekly discussion board posts and other interactive activities via Blackboard, which is the official course website. Students should complete assignments and posts in a fashion that is convenient with their individual schedules, while meeting the overall course deadlines.

## Instructor Contact Information:

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## Course Description:

Students will examine the use and management of information systems in the healthcare environment by focusing upon clinical information systems, healthcare information systems, data quality standards, and information exchange standards. Students will utilize a case-study method to deepen their understanding of healthcare information security, systems acquisition, implementation, and support. Students will critically assess service challenges and strategic information management concepts.

## Text & Primary Course Materials:

### Required texts

1. Wager, K. A., Lee, F. W., & Glaser, J. P. (2017). *Health care information systems : a practical approach for health care management* (Fourth edition. ed.). San Francisco, CA: Jossey-Bass.
2. Journal articles and web resources posted to the Blackboard course

## Course Objectives:

By the end of this course, students will be able to:

- Define the scope of healthcare information systems,
- Compare and contrast definitions of health information systems,
- Critically evaluate information systems components,
- Differentiate among healthcare information support systems,
- Evaluate and compare the quality and importance of data elements,
- Identify uses of patient data in the pursuit of quality, safety, and efficiency,
- Define patient data security regulations and requirements,
- Discuss the major barriers to information system adoption,
- Elaborate on healthcare information system utilization strategies, and
- Assess the value of information systems and suggested interventions to increase value.

## **Assessment of Student Learning and Teaching Effectiveness:**

This course will be offered in an online format using Blackboard as the student learning system and course management system. The online course format utilizes four specific teaching methods, lectures, readings, discussions, and case studies.

### **Lectures**

Lectures will be posted to Blackboard and may include narrated PowerPoint presentations. Students are expected to carefully review each lecture and are responsible for the lecture content each week.

### **Readings**

Students will be assigned specific chapters and additional articles. Students are expected to read all assigned readings unless otherwise noted.

### **Discussions**

Each week students will participate in an online discussion board to promote reflection and solidify learning. Students are encouraged to relate readings and discussion boards to real-world experience, but they must retain a scholarly perspective.

## **Course Requirements:**

### **Late Assignments**

All assignments are to be turned in on the due date indicated by 11:59PM EST via the Blackboard Dropbox. Unless prior approval has been received by the instructor, points will be deducted for assignments submitted late. Any assignment submitted more than three (3) days after the due date without prior approval from the instructor will not be accepted and will result in a grade of zero (0).

### **Citations**

All assignments, writing, discussion boards and otherwise will use follow American Psychological Association (APA) style. The use of citation management software, such as EndNote or Zotero, is recommended. Students can also purchase the *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: American Psychological Association). Please note that this is not a required text for this course.

### **Plagiarism and Turnitin**

Students are expected to abide by the university Academic Honesty Policy as explained in the Student Handbook. Plagiarism is considered a violation of this policy. Plagiarism is defined as submitting another person's work as one's own without proper acknowledgement or using the words or ideas of others without crediting the source of those words or ideas. In order to deter plagiarism and ensure appropriate use of resources in student research and learning, the university subscribes to a plagiarism prevention service ([www.turnitin.com](http://www.turnitin.com)). Faculty may request students to submit their written work electronically in order to verify that when the ideas of others are used they are cited properly. The course syllabus identifies above that all written assignments are turned in electronically via Blackboard and will provide appropriate instructions. Each instance of plagiarism either intentional or unintentional will result in a 10% reduction in the grade of the assignment PER OCCURRENCE. Failing grades due to plagiarism will be submitted to the Dean of Students as outlined in the Student Handbook.

Students must abide by the academic policies and procedures set forth in the MCPHS University Catalog. Important information regarding excused absences approval, Disability Support Services for students, Academic Honesty and Plagiarism and other academic policies are set forth in the Academic Policies and Procedures section of the MCPHS University Catalog. <https://my.mcphs.edu/CollegeCatalog>. Students must read, understand, and comply with all of these policies and procedures.

## Grading

Grades for each assignment will be posted in the *Blackboard* grade center.

### Course Grading Scale

A	100-93	B	87-83	C	77-73
A-	92-90	B-	82-80	C-	72-70
B+	89-88	C+	79-78	D	<69

### Grading and Evaluation Standards

#### *Weekly Discussions, 20%*

Actively participating and contributing high-quality content to the online discussion boards is essential to student success in this class. Each week, students will be required to post an answer to a discussion topic posted in the forums by Wednesday evening and you should “reply” to at least two other postings on the discussion board by Saturday evening. By ensuring the students original response to the posted discussion question is submitted by Wednesday evening, it allows ample time for other students to reply to the discussion threads of their choosing.

#### *Assignments and Case Studies, 25%*

There will be weekly assignments or case studies to gauge students understanding of the weekly lecture topic. The assignments are primarily focused on one topic but will require the student to use all of their knowledge gained from prior weeks to complete.

#### *Systems Implementation Plan, 25%*

Students will develop an EHR systems implementation plan describing the process from RFP through post-live stages. More information will be given in week 6 when the assignment is released; this assignment will be due at the completion of week 8.

#### *Final Examination and Case Studies, 30%*

Final Examination: 50%, Case Study 1: 25%, Case Study 2: 25%

This course will have a final examination and two written case studies. The examination will test the student’s understanding of the core course objectives and the case studies will require the student to apply their knowledge of healthcare information systems to two real world situations. More information about the makeup of the examination and case studies will be provided in week 11 and both components will be due at the conclusion of the course in week 13.

## Course Outline

Please see the Weekly Assignment Schedule posted in the Blackboard course for the due dates and times.

	<b>Readings, Assignments, &amp; Objectives</b>
<b>Week 1</b>	<b>Focus:</b> Introduction to Healthcare Informatics and Healthcare Data
	<b>Primary Reading(s):</b> Wager, Chs. 1 & 2
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Define the concept of healthcare informatics</li> <li>2. Relate healthcare informatics and healthcare information systems</li> <li>3. Begin to develop an understanding of the content and uses of patient records</li> <li>4. Describe the basic uses of healthcare data</li> <li>5. Understand the roles of national private sector and government initiatives on healthcare information technology</li> </ol>
<b>Week 2</b>	<b>Focus:</b> Technologies that Support Healthcare Information Systems
	<b>Primary Reading(s):</b> Wager, 3 <sup>rd</sup> Ed., Ch. 9 (link available on Blackboard)
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Determine core necessities of healthcare information systems</li> <li>2. Evaluate healthcare information systems using the Gartner Hype Cycle</li> <li>3. Describe major issues in the adoption of information systems</li> <li>4. Identify opportunities to expand and support health information systems</li> <li>5. Gain a basic understanding of the core technologies behind healthcare information systems</li> </ol>
<b>Week 3</b>	<b>Focus:</b> Organizing Information Technology Services
	<b>Primary Reading(s):</b> Wager, Ch. 8
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Describe the functions and responsibilities of an IT department within healthcare organizations</li> <li>2. Evaluate information technology service formats within healthcare organizations</li> <li>3. Identify key attributes of successful information technology formats in healthcare organizations</li> <li>4. Provide examples of successful applications of information systems within healthcare organizations</li> <li>5. Discuss the different ways IT services may be organized and governed within a healthcare organization</li> </ol>

<b>Week 4</b>	<b>Focus:</b> Healthcare Information System Standards
	<b>Primary Readings:</b> Wager, Ch. 11
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Identify the four methods of standards development</li> <li>2. Discuss the importance of information systems in healthcare business processes</li> <li>3. Discuss the role of federal initiatives that have an impact on the adoption of healthcare information standards</li> <li>4. Identify the different major information standards and the role they play on healthcare information technology</li> <li>5. Understand the importance of healthcare information standards and their impact on healthcare delivery</li> </ol>
<b>Week 5</b>	<b>Focus:</b> Healthcare Information Systems and Information Systems to Support Population Management
	<b>Primary Reading(s):</b> Wager, Chs. 3 & 4
	<b>Assignment:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Identify the major types of administrative and clinical information systems used in healthcare</li> <li>2. Explain the history and evolution of healthcare information systems</li> <li>3. Discuss the key functions and capabilities of electronic health record systems</li> <li>4. Identify key health IT tools and strategies for population risk management</li> <li>5. Understand the data and information needs of health systems that manage population health</li> </ol>
<b>Week 6</b>	<b>Focus:</b> Systems Acquisition
	<b>Primary Reading(s):</b> Wager, Ch. 5
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Identify key elements in the process of system evaluation and selection</li> <li>2. Discuss methods of healthcare information system acquisition</li> <li>3. Evaluate common issues of information system implementation</li> <li>4. Define the business case for information systems</li> <li>5. Utilize health technology assessments to evaluate information system benefits</li> </ol>
<b>Week 7</b>	<b>Focus:</b> Systems Implementation and Support
	<b>Primary Reading(s):</b> Wager, Ch. 6
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Identify important information system implementation steps</li> <li>2. Evaluate information system implementation plans for healthcare organizations</li> <li>3. Discuss the importance of training, technical support, and infrastructure, upon system implementation</li> <li>4. Define incremental change plans in systems development</li> <li>5. List key stakeholders in systems implementations</li> </ol>

<b>Week 8</b>	<b>Focus:</b> Privacy and Security
	<b>Primary Reading(s):</b> Wager, Ch. 9
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Distinguish between privacy, confidentiality, and security as they relate to health information</li> <li>2. List the healthcare major data security regulations and requirements</li> <li>3. Evaluate organizational regulatory compliance procedures and identify weaknesses</li> <li>4. Discuss different administrative, physical, and technical safeguards for information systems</li> <li>5. Describe the components of business continuity and disaster recovery plans for healthcare organizations</li> </ol>
<b>Week 9</b>	<b>Focus:</b> IT Alignment and Strategic Planning
	<b>Primary Reading(s):</b> Wager, Ch. 12
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Understand the importance of an IT strategic plan</li> <li>2. Discuss the challenges of developing an information technology strategic plan</li> <li>3. Explain the business case for information technology strategic planning</li> <li>4. Identify critical decision points in the strategic planning process</li> <li>5. Compare and contrast information technology strategic plans in healthcare organizations</li> </ol>
<b>Week 10</b>	<b>Focus:</b> IT Governance and Management
	<b>Primary Reading(s):</b> Wager, Ch. 13
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Understand the scope and importance of IT governance within a healthcare organization</li> <li>2. Discuss the common components of an IT budget and the overall budget development process</li> <li>3. Identify how an IT department can contribute to the overall competitiveness of an organization</li> <li>4. Discuss the roles and responsibilities of end-users, IT staff and administrators, and senior management at a healthcare organization</li> <li>5. Identify factors that sustain continued excellence of IT applications</li> </ol>
<b>Week 11</b>	<b>Focus:</b> Performance Standards and Measures
	<b>Primary Reading(s):</b> Wager, Ch. 10
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Explain the role of health information in national private and public quality improvement programs</li> <li>2. Discuss the differences between licensure, certification, and accreditation processes as they relate to healthcare</li> <li>3. Understand healthcare performance measurement in the United States</li> <li>4. Identify the origins and uses of healthcare comparative data sets</li> <li>5. Discuss the roles of the Joint Commission and the NCQA in regards to healthcare quality</li> </ol>

<b>Week 12</b>	<b>Focus:</b> Assessing and Achieving Value in Healthcare Information Systems
	<b>Primary Reading(s):</b> Wager, Ch. 7
	<b>Assignments:</b> Announced on Blackboard
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. Discuss the nature of IT-enabled value and the impact on healthcare organizations</li> <li>2. Identify the major components of an IT project proposal and their impact on the overall outcome of the project</li> <li>3. Understand the steps and remediation to improve IT projects</li> <li>4. Identify factors that contribute to IT project failures</li> <li>5. Evaluate strategies for successful information technology project management</li> </ol>
<b>Week 13</b>	<b>Focus:</b> Final Examination
	<b>Primary Reading(s):</b> None
	<b>Assignments:</b> <ol style="list-style-type: none"> <li>1. Final Examination</li> <li>2. Final Written Case Studies</li> </ol>
	<b>Objectives:</b> <ol style="list-style-type: none"> <li>1. None</li> </ol>