

Healthcare Management & Information Systems Syllabus

» Course Overview

In this course, students will explore the comprehensive world of healthcare information and management. Throughout the modules, students will learn about the history of the healthcare system as well as the current best practices in the field. They will explore the innovative technologies being developed and applied in patient care and patient privacy. Students will become familiar with the specific terminology utilized within clinical and information technology systems. Students will investigate the complexities of the business of healthcare, including data organization and security considerations. Finally, students will identify the ways in which communication and leadership go hand in hand with a thriving career in healthcare information and management systems.

» Course Outline by Module

Module 1	Healthcare	Module 5	The Systems Development Life Cycle Part II
Module 2	Technology	Module 6	Communication
Module 3	Clinical Informatics	Module 7	Management and Leadership Part I
Module 4	The Systems Development Life Cycle Part I	Module 8	Management and Leadership Part II

» Module Overview and Learning Objectives

| Module 1. Healthcare

Working in healthcare in any capacity requires fundamental knowledge of the healthcare system. In this module, students will be introduced to the basic characteristics, interrelationships and services of different types of healthcare such as hospitals, clinics, physician practices, and more. They will also learn the difference between inpatient and outpatient healthcare. The module will then explore various healthcare services provided at the federal level and how those services impact the industry. Next, students will be

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introduced to various positions and departments within healthcare organization so they can better understand how each part functions within the system. Finally, the module will conclude with an examination of healthcare regulations and financing.

Learning Objectives: In this module, students will:

- Recognize basic characteristics, interrelationships and services of different types of healthcare organizations (e.g., hospitals, clinics, physician practices, ambulatory centers, community health organizations, and urgent care.)
- Identify the types of inpatient and outpatient healthcare services.
- Demonstrate knowledge of the various healthcare services provided at the federal level.
- Determine the various positions and departments within healthcare organizations.
- Explore healthcare regulations and financing.

| Module 2. Technology

In this module, we will explore the emerging role of technology in healthcare. Students will explore some of the trends in healthcare technology including telemedicine, patient portals, wearable devices, 3D printing, and others. Next, students will learn about the role cost and quality of care play in health IT use. From there, students will be given a foundational overview of the computer software used in Health IT. At this point, students will have a sufficient background knowledge in health technology to explore the evolution of electronic health record applications as well as to evaluate the trends impacting health IT, the IT infrastructure, and the use of applications.

Learning Objectives: In this module, students will:

- Recognize trends in healthcare technology (e.g., telemedicine, patient portals, wearable devices, 3D printing)
- Identify cost and quality-of-care concerns that drive Health IT use.
- Describe the computer software used in Health IT.
- Analyze the evolution of electronic Health Record Applications.
- Evaluate the trends affecting Health IT, IT Infrastructure, and the use of applications.

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| Module 3. Clinical Informatics

This module will expose students to a variety of basic clinical vocabulary frequently represented in healthcare informatics. Understanding these terms will enhance communication with other healthcare workers. Next, students will learn healthcare IT terms such as LAN, SMS, and VPN. An important part of healthcare improvement is utilizing clinical metrics. Students will become familiar with some of the basic key performance indicators used in healthcare. The module will also identify opportunities to optimize clinical effectiveness and efficiencies through informatics. Then students will learn about various data visualization techniques such as tables, charts, and graphs. The module will conclude with a discussion about maintaining clinical content and decision support tools.

Learning Objectives: In this module, students will:

- Identify basic clinical vocabulary/terms frequently represented in healthcare informatics (e.g., dosage frequency, dosage routes, body systems)
- Identify basic healthcare IT vocabulary/terms frequently represented in healthcare informatics (e.g., LAN, SMS, VPN)
- Identify basic clinical metrics frequently represented in informatics
- Identify and support opportunities to optimize clinical effectiveness and efficiencies
- Understand various data visualization techniques (e.g., tables, graphs, charts)
- Maintain clinical content and decision-support tools

| Module 4. The Systems Development Life Cycle Part I

Systems typically follow a general process of analysis, planning, design, design, testing, integration, and maintenance. In this module, students will receive a broad overview of each of the steps. With this understanding in place, students can then understand basic analysis and interpretation. This will include becoming familiar with concepts such as requests for information, requests for proposals, and non-disclosure agreements. Next, the module will explore design concepts such as useability, user-centered design, and data organization. Students will then be introduced to requirement gathering and basic project management plans. Finally, the module will conclude by introducing students to and analyzing the components of business continuity planning.

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Learning Objectives: In this module, students will:

- Explore the Systems Development Life Cycle.
- Conduct basic analysis and interpretation including Requests for Information, Requests for Proposals, and Non-Disclosure Agreements.
- Explore design concepts including useability, User-Centered Design, and data organization.
- Evaluate requirement gathering and Project Management Plans.
- Analyze the components of Business Continuity Planning.

| Module 5. The Systems Development Life Cycle Part II

Selecting an EHR system is a complex process. This module will explore the general process for system selection as well as the role interoperability and data exchange standards play in EHR systems. Because selecting a system is only one small part of the systems development life cycle, students will then explore other fundamental parts such as the implementation process and the components of testing and evaluation. Finally, the module will conclude with an evaluation of the privacy and security considerations for health IT.

Learning Objectives: In this module, students will:

- Understand the process of successful system selection and EHR certifications
- Identify Interoperability and Data Exchange standards as well as vendor-specific considerations.
- Explore implementation and support systems.
- Analyze the components of testing and evaluation.
- Evaluate the privacy and security considerations for Health IT.

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| Module 6. Communication

Building successful systems requires collaborating with others and communicating ideas and progress. This module will focus on building good communication skills. It will start with a lesson on applying basic speaking and active listening skills. Learning how to communicate this way will make for better collaboration. Next, students will learn about observation and documentation which is crucial to the healthcare industry for both providers and those creating systems. Then the module will identify characteristics of successful and unsuccessful communication and the obstacles that occur. Understanding verbal and non-verbal cues is another essential component of communication and will be explored in the module. Finally, the module will end with an exploration of written communication.

Learning Objectives: In this module, students will:

- Apply basic speaking and active listening skills with meaningful feedback.
- Apply basic observational skills and related documentation strategies in written and oral form.
- Identify characteristics of successful and unsuccessful communication including barriers.
- Recognize verbal and non-verbal cues.
- Demonstrate written communication including emails using correct spelling, grammar, formatting, and confidentiality.
- Demonstrate ability to create professional correspondence using appropriate email practices and etiquette.

| Module 7. Management and Leadership Part I

This module will begin looking at effective management and leadership in healthcare IT. First, students will assess the organizational environment such as corporate cultures, values, and drivers. Next, students will understand the components of an IT strategic plan including process maturity and growth, gap analysis, quality improvement, organizational alignment, roles and responsibilities, and performance measurements. From there, the module will explain to students the importance of gathering and compiling metrics to monitor and assess specific organizational performance indicators.

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Then, students will learn about compliance with legal and regulatory standards. Finally, the module will explore the role of ethics in the organization.

Learning Objectives: In this module, students will:

- Assess the organizational environment (e.g., corporate culture, values, and drivers)
- Understand components of an IT strategic plan (e.g., process maturity and growth, gap analysis, quality improvement, organizational alignment, roles and responsibilities, performance measurement)
- Gather and compile metrics to monitor and assess specific organizational performance indicators
- Monitor, assess and report on key performance indicators of systems effectiveness
- Comply with legal and regulatory standards
- Understand and comply with the organization's ethical business principles

| Module 8. Management and Leadership Part II

The last module of the course will continue to focus on management and leadership. In the first lesson, students will learn about creating reports, presentations, and project proposals. The lesson will instruct best practices for presenting new ideas and creating effective visuals. Next, students will learn about strategies for staying current in health IT given that it is such an evolving industry. They will also learn about the common risks that health IT brings to organizations and ways to mitigate and manage the risks. Then, the module will revisit the topic of ethics, focusing on how to maintain ethical relationships with clinicians, vendors, and partners. Next, students will learn strategies for identifying and providing data to support recommendations for decision-makers. The module will conclude with a discussion about how health IT workers can support change management processes and the importance of understanding individual roles, responsibilities, and job descriptions.

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Learning Objectives: In this module, students will:

- Prepare and deliver business communications (e.g., presentations, reports, project plans)
- Maintain awareness of emerging industry trends
- Identify and recommend strategies to mitigate organizational risk
- Maintain effective and ethical working relationships with internal and external stakeholders (e.g., clinicians, vendors, partners)
- Identify and provide data to support recommendations for decision-makers
- Understand and support organizational change management processes
- Understand individual and team roles, responsibilities, and job descriptions