



Health Information Systems – HSA520

Prerequisite: None

Quarter

Meeting Days/Time

Instructor

Instructor Phone

Instructor E-mail

Instructor Office Hours/Location

Academic Office Phone Number

INSTRUCTIONAL MATERIAL

(including all mandatory software)

Austin, C. J., & Boxerman, S. B. (2003). *Information systems for healthcare management* (6th ed.). Chicago: Health Administration Press.

I. COURSE DESCRIPTION

Provides an overview of modern information technologies for locating health statistics and covers basic concepts of data quality and presentation. Familiarizes students with the scope and range of data systems and explores important health indicators with emphasis on decision-making needs. Will also explore the collection, analysis and reporting of data.

II. EXPECTED LEARNING OUTCOMES

Upon the successful completion of this course, the student will be able to:

- a. Demonstrate an understanding of the basic technology underlying healthcare information systems
- b. Identify the main features and capabilities of patient care applications, management and enterprise systems, e-health applications, and strategic decision-support applications within the healthcare setting
- c. Explain the process of developing a strategic information system plan and describe its basic components
- d. Demonstrate an understanding of the systems development life cycle as it pertains to both the development of a custom application and the selection of proprietary systems
- e. Discuss the need for and identify methods of accomplishing the security of information systems
- f. Discuss senior management's role in information technology management
- g. Given an information requirement related to information systems used in health services, determine the nature and extent of information needed to effectively address the topic; efficiently locate, determine the validity, and critically evaluate the resources; and apply the information to accomplish the specific purpose (report, case analysis, factual requirement, problem solving, planning).

- h. Construct and implement a refined information search using various resources (the University Learning Resource Center (LRC) collections and services, scholarly journals in a field of study, the World Wide Web, and online database or other sources appropriate to the topic), select relevant and valid information sources, use this information ethically and legally avoiding plagiarism and composing proper APA references, synthesizing this information to reach informed conclusions with supporting rationale, and present the conclusions.

**Course instructor may provide additional outcomes in this section as well.*

III. EXPECTED WEEKLY LEARNING OUTCOMES

The following weekly learning outcomes will be addressed:

Week 1

Chapter 1

- a. Provide an historical overview of information technology in the healthcare system
- b. Describe the current healthcare environment
- c. Identify the priorities of health information today
- d. List the categories of information systems
- e. Identify organizations that support the work of information professionals in the healthcare field

Week 2

Chapter 2

- a. Describe the systems theory approach to the development of information systems
- b. Identify the basic characteristics of most information systems
- c. Identify the key components of management control and decision support systems
- d. List the characteristics of useful information
- e. Identify the principles of information resource management

Chapter 3

- a. Identify the basic components of a computer
- b. Describe the functions of the basic components of a computer
- c. Differentiate between classes of computers

Week 3

Chapter 4

- a. Identify the various classifications of computer software
- b. Compare and contrast integrated versus interfaced systems
- c. Identify the functions of system management software
- d. Provide a brief overview of programming languages
- e. List the various forms of language translators.

Chapter 5

- a. Describe the rationale for installing computer networks
- b. Identify ways of distributing the processing function
- c. Identify the various components of a typical network

Week 4

Chapter 5

- a. Identify and describe various network topologies
- b. Describe electronic data interchange
- c. Identify different types of wireless communications devices
- d. Describe wireless topologies
- e. Describe the process of communicating via the Internet

Chapter 6

- a. Identify the various types of computer files
- b. List common problems associated with computer files
- c. List the benefits of using a database approach
- d. Describe various database models
- e. Describe the functions of a database management system
- f. Identify various approaches to data security
- g. Recognize current developments in database technology
- h. Describe a typical data warehouse

Week 5 Midterm Examination No additional learning outcomes, mid-term examination administered. **Note:** Instructor may introduce the remaining major topic areas in the course as a preview or use this period to review previous topics.

Week 6

Chapter 7

- a. Describe the role of computer based patient records
- b. Explain the process of order entry and results reporting
- c. Identify clinical services applications
- d. Describe the roles of Ambulatory care information systems, nursing information systems, and clinical decision support systems in the healthcare field

Chapter 8

- a. Identify and describe various management and administrative applications
- b. Identify managed care applications
- c. Identify the functions of an enterprise-wide system

Week 7

Chapter 9

- a. Identify the driving forces behind the emergence of e-health
- b. Identify e-health applications
- c. Identify marketing and consumer information applications
- d. Identify organizational management and communications applications
- e. Identify clinical and customer service applications
- f. List specific management strategies related to the implementation of Internet technologies

Chapter 10

- a. Explain the concept of decision-support
- b. Provide an overview of decision-support systems

- c. Identify the components of a decision-support system
- d. List the uses of a decision support system
- e. List the characteristics of useful management information
- f. Identify information needs for decision support
- g. List the three basic sources for obtaining decision support information
- h. Describe the various approaches to acquiring and implementing decision-support systems
- i. Identify common decision-support applications

Week 8

Chapter 11

- a. List the purposes of strategic information systems planning
- b. Describe the importance of system integration
- c. Identify the steps that go into organizing the planning effort
- d. List the elements of a strategic information systems plan
- e. Explain the process of setting enterprise-wide standards and policies

Chapter 12

- a. Explain the process of project organization
- b. List and describe in detail each of the steps of the system development life cycle
- c. Identify systems analysis tools including: data collection tools, data organization tools, and analysis tools
- d. List the benefits of systems analysis
- e. Evaluate application software

Week 9

Chapter 13

- a. Explain the need for information security
- b. List government security requirements
- c. Identify the main purposes of the Health Insurance Portability and Accountability Act, or HIPAA
- d. Describe typical information security policies and procedures
- e. Identify the elements that go into a comprehensive information security policy

Chapter 14

- a. Describe the role of the chief information officer in information technology management
- b. List the factors that affect the organization and staffing of an information systems department
- c. Identify budget and staff requirements
- d. List the potential benefits of outsourcing
- e. List the potential drawbacks of outsourcing
- f. Describe the role of the senior manager today and in the future
- g. Identify industry-wide standards for data definition and information transmission

Week 10 Team Project Presentations

Week 11 Final Examination

IV. COURSE OUTLINE

DATE	CHAPTER	INFORMATION
Week 1	Chapter 1	Introduction and Overview
Week 2	Chapter 2 Chapter 3	Information Technology & Managerial Control Computer Hardware
Week 3	Chapter 4 Chapter 5	Computer Software Networking and Telecommunications
Week 4	Chapter 5 Chapter 6	Networking and Telecommunications Data Management
Week 5		Midterm Examination
Week 6	Chapter 7 Chapter 8	Patient Care Applications Management and Enterprise Systems
Week 7	Chapter 9 Chapter 10	E-Health Applications Strategic Decision-Support Applications
Week 8	Chapter 11 Chapter 12	Strategic Information Systems Planning Application Development and Project Management
Week 9	Chapter 13 Chapter 14	Information Security Senior Managers' Role in Information Technology Management
Week 10		Team Project Presentations
Week 11		Final Examination

V. COURSE REQUIREMENTS AND TEACHING STRATEGIES

The course will be conducted using lecture/discussions, in-class group discussions, and individual assignments. Class sessions will include discussions on current issues in managing health services information. Group discussions and assignments will be conducted to enhance collaborative learning. Student comprehension of course content will be assessed through examinations, group case analysis, individual research/case analysis assignments, and active participation in class discussion sessions.

Course requirements:

- a. Mid-term examination
- b. Final examination
- c. Completion of all assignments
- d. Active class participation
- e. Regular class attendance

NOTE TO INSTRUCTOR; This section outlines major course events, including an overview of the conduct of the course and summarizes the basic mechanisms of course events (group discussions and summaries or presentations, examinations, individual problem or research assignments, etc). This section should describe the nature/context/intent of assignments, describe a basic class session format, and explain any reference or research requirements, due dates, turn in process, and any late work policy. Group discussions and class presentations (or posting to class web site) of group discussion/exercise results should be scheduled throughout the course.

All Graduate Courses

Writing Assignments

The objective of graduate level writing assignments is to promote attitudes and skills that will improve a student's ability to communicate in writing, develop research skills and documentation techniques, and encourage critical analysis of data and conclusions.

All graduate courses must include assignments totaling a minimum of ten pages of writing. The writing requirement may be fulfilled through one long research paper or several shorter writing projects such as journal reports, journal entries, book or article reviews, class projects or essay examinations as deemed by the instructor to be appropriate for the discipline.

Instruction and evaluation methods will vary by teacher and course, but some general guidelines apply. Students should be given clear task objectives and expectations for each writing assignment. In-class discussion of sample work and collaborative writing projects can provide guidance in addition to written feedback from instructors. When evaluating work, instructors should assess students' adherence to the assigned writing objectives, clear organization and presentation of their ideas, evidence of original thought and critical analysis, etc.

American Psychological Association (APA) Style

All written work submitted by students in this course must conform to the most recent APA guidelines for referencing, in text citations, appendices, and/or any means of crediting an outside source.

VI. EVALUATION METHODS

Final Grade	
Mid-Term Examination	%
Final Examination	%
Assignments, etc...	%
Class Participation	%

NOTE TO INSTRUCTOR: This section outlines key objectives or assignments upon which a student's grade will be based. Instructors should explain how students will be assessed and the grading criteria (including but not limited to exams, group exercises, individual assignments, etc.).

Grading Scale

90-100	A
80-89	B
70-79	C
Below 70	F

VII. UNIVERSITY NOTICES

Honor Pledge

All work submitted for this course is subject to the University's Academic Integrity Policy available in the Student Handbook and the University's Honor Pledge, printed below:

I have read and understand Strayer University's Academic Integrity Policy. I promise to conduct myself with integrity in the submission of all academic work to the University and will not give or receive unauthorized assistance for the completion of assignments, research papers, examinations or other work. I understand that violations of the Academic Integrity Policy will lead to disciplinary action against me, up to and including suspension or expulsion from the University. I understand that all students play a role in preserving the academic integrity of the University and have an obligation to report violations of the Academic Integrity Policy committed by other students.

Academic Integrity

Strayer University holds its students to high standards of academic integrity and will not tolerate acts of falsification, misrepresentation or deception. Such acts of intellectual dishonesty include, but are not limited to, cheating or copying, fabricating data or citations, stealing examinations, the unauthorized use of instructor editions of textbooks, taking an exam for another student or having another student take an exam intended for oneself, tampering with the academic work of another student, submitting another's work as one's own, facilitating other students' acts of academic dishonesty, using internet sources without citation and plagiarizing.

Plagiarism

Plagiarism means the act of passing off the work or ideas of another person as one's own. Plagiarism can be either intentional (for example, downloading a research paper from the Internet and submitting it as one's original work), or unintentional (for example, the single improper citation of another person's statement). Both forms of plagiarism are unacceptable at Strayer University, but the penalties may vary with the type and seriousness of the infraction.

Course Participation Guidelines for Students

The University encourages open discussion within its courses and often asks students to draw from personal experience in their responses to course assignments. Though such information should be used only for educational purposes, the University cannot guarantee that such information will remain confidential. Students are responsible for knowing the applicable policies of their employers and others with regard to the sharing of confidential information and using appropriate discretion. Additional care should be used when posting to online discussion boards where written comments are preserved. The University is not legally responsible for any inappropriate postings through its online discussion boards (i.e. those that violate University policy, defame another person, etc.). In order to preserve an open discussion within the classroom environment, students may choose to not specifically identify their current or previous employers by name or withhold other similar identifying information. Questions or concerns regarding this policy should be directed to the course instructor or the applicable Campus Dean, Strayer University Online Dean of Students or the Dean of Student Affairs.

Attendance Policy

Students are expected to attend all regularly scheduled classes. Should absences be necessary, students are responsible for the material covered during the absences. Faculty cannot grant requests for excessive amounts of make-up material, and they may request written documentation detailing the reason for the absences.

Excessive absences make it almost impossible for a student to meet the academic objectives of a course; they frequently cause a student to receive a lower grade, even though, the absences were unavoidable.

Strayer University requires all faculty members to take attendance during each class period and to record it accurately on their permanent roster. This data is available for verification of attendance by the appropriate governmental agencies and educational accrediting organizations.

A student who is absent from four consecutive class meetings, excluding holidays and emergency cancellation of classes, will be withdrawn automatically from that course. A student will be withdrawn automatically from a mini-session course when he/she misses two consecutively scheduled class meetings.

Attendance in an online asynchronous course is automatically recorded by the system. Even though accessing an online asynchronous course only once a week is sufficient for a student for attendance purposes, an active participation by the student helps the student's performance and overall grade. Each week runs from Monday through Sunday (midnight) Eastern Time. In a Synchronous course, attendance is taken by the Instructor during each live session.

APA Style (if essay/research paper requirements present in the course)

Strayer University uses the APA (American Psychological Association) Writing Style in all its courses which require a Paper or Essay. Instructors provide information on some useful resources in the course.

Grade Dispute Policy

If you have questions with regard to the grading policies in this course, please contact the instructor for clarification. Questions on the final grades received in this course should be directed to the instructor of the course. In the event you still seek to dispute the final grades after contacting the instructor, please go to the Online Help Center to record your grievance and requesting an action on it. For further information, please see the Student Handbook.

Inclement Weather Policy

In the event of inclement weather, consult the Strayer University student website at <http://studentserver.strayer.edu> for information on University closings and delays.

VIII. UNIVERSITY SERVICES

Learning Resources/Library

A variety of learning resources designed to help students succeed academically is available through the Strayer University Library or Learning Resources Center (LRC). Each campus LRC offers print resources, books, and periodicals for research. Circulating books located at any LRC may be requested for use through the LRC Manager.

Library resources are also available online, and can be accessed from any computer connected to Internet through the Resource tab located on the e-College course web pages. The Library's online databases and other research resources can be accessed through the University's website at

<http://online.strayer.edu/lrs/resourcecenter/home.htm>. These web pages provide thousands of full text periodicals, over 50,000 electronic books, radio and TV transcripts, the complete Encyclopedia Britannica, access to the Strayer University Library catalog, online tutorials, and useful links to Internet resources. A tour, if possible, of the LRC is highly recommended and can be scheduled through your LRC Specialist.

Tutoring Services

Tutoring is offered for undergraduate level courses in subject areas such as English, writing skills development, mathematics, accounting and computer information systems. All students have access to these free tutoring services-whether they are taking classes at a brick-and-mortar campus or via Strayer Online. Tutoring services are provided by either a full-time or part-time faculty member with a strong background in the subject area in which he or she is tutoring.

Campus based tutoring schedules vary slightly, but typically tutoring services are available Monday through Friday in the late afternoon and Saturday mornings in order to accommodate the needs of our student body. Students should check with their Academics Office for a tutoring schedule and information on how to schedule an appointment.

Notice to Students with Disabilities

Strayer University welcomes students with disabilities and provides reasonable accommodations and auxiliary aids and services in accordance with applicable law. A disabled student is not required to disclose his/her disability to the University unless the student wishes the University to provide a reasonable accommodation. If you desire accommodation for a disability in this course and have not already contacted the office of the Dean of Student Affairs with your request, please do so immediately. Requests may be submitted to: 1133 Fifteenth Street, NW, Suite 300, Washington, D.C. 20005, Phone: (202) 419-0400, Fax: (202) 419-1423.

Security on Campus

Any person in immediate danger due to crime or emergency while on University property should contact local police immediately by dialing 911. When the emergency has subsided, the victim should also report the incident as soon as possible to the Campus Director of the location where the incident occurred. The University's Campus Security Report is available on the Strayer University student website at <http://studentserver.strayer.edu>.

Turnitin (*if used in the course*)

Due to Strayer University's firm belief in upholding academic integrity and honesty, a contract has been signed with "Turnitin", which is a plagiarism detection software. Certain courses may include Essays/Research Papers as assessment items, which serve to evaluate not only the effectiveness of a student's writing skills, but also a student's research skills (including proper citations and use of sources/references), critical-thinking skills, and ability to provide strong argument to support and defend their point-of-view. In order to effectively (and fairly) measure these attributes in a student, it is important to know that the student has submitted an original work. This is where the Turnitin feature is utilized. Students are allowed to run their Essay/Research Paper through this software themselves to detect any

unintentional (or, intentional) plagiarism and then make the necessary changes before making the final submission to their Instructor for grading. This opportunity allows the students to make corrections in their paper and submit an original work. The Instructor reserves the right to run the students' work through this utility again and, in the event of finding any level of plagiarism, may use his/her discretion to grade the students' work.