

Syllabus for HIMT435

Data Communications and Networks in Healthcare

NOTE: This syllabus document contains the basic information of this course. The most current syllabus is available in the full course.

Course Description

This course provides fundamentals of data communications and networking techniques, and examines the linkage of information technology strategies and technological solutions enabling effective communication within and between health care organizations. Major topics include fundamental concepts of data communications and applications, network communication devices, basic technologies of the local area network (LAN), backbone network, wide area network (WAN), Internet and the Web, the OSI stack, health care information systems standards, health care information exchange (HIE), and Nationwide Health Information Network (NHIN).

Prerequisite(s)

HIMT 301 Digital Literacy in Healthcare

Course Outcomes

This course covers fundamentals of networking and data communication technologies, protocols, and standards that support health care information systems. Upon successful completion of the course, students will demonstrate an understanding of the fundamental concepts and architecture of data communications. Students will be able to describe the manner in which health organizations use data communication technologies to support daily operations and achieve organizational strategies. Students are also expected to do research on modern and emerging networking technologies applied in health care organizations.

At the conclusion of this course, you will be able to:

- Understand hardware and software components of telecommunications systems and how they are organized to provide required services.

- Present architecture, topologies, and protocols of telecommunications and computer networks.
- Describe Health Level Seven (HL7) standards.
- Understand HIE and major health care network standards.
- Research and discuss issues pertinent to the emerging technologies and network applications in health care.

Grading

The following grading scale will be used to evaluate all course requirements and to determine your final grade:

Grade	Percentage Range
A	90% - 100%
B	80% - 89%
C	70% - 79%
D	60% - 69%
F	0 - 59%

Assignment	% of Course Grade
Quizzes	45
Assignments	20
Final Research Project	15
Class Discussion and Participation	20
Total	100%