

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
HIM 230 – INFORMATION SYSTEMS AND TECHNOLOGY IN HEALTH CARE (3 CR.)

Course Description

Explores computer technology and system applications in healthcare. Introduces the information systems life cycle. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

General Course Purpose

Computer systems in health care will be discussed with emphasis on systems encountered by Health Information Departments. Clinical data repositories, community health information networks, telemedicine, the evolvement/advancement of computerized medical record, and optical disc will be discussed. Creating and maintaining databases and alternative methods for formatting and presenting data will be applied. The importance of data integrity and the effects on health care organizations will be emphasized.

Course Prerequisites/Co-requisites

Prerequisites are HIM 142 and HIM 130.

Course Objectives

Upon completion of this course, students will be able to:

- Identify the internal and external users of secondary data.
- Describe the role of the health information management professional in creating and maintaining secondary records. Select the most appropriate methods for ensuring data security and the confidentiality of secondary records.
- Differentiate between file management systems and database management systems; identify advantages *and* disadvantages of each.
- Discuss the major types of databases.
- Use the terms pertinent to each type of secondary record or database.
- Distinguish among healthcare databases in terms of purpose and content.
- Identify, describe, and apply data validation checks, edits, or rules for database fields.
- Identify and describe the various components of a database structure and model.
- Compare the facility-specific indexes commonly found in hospitals.
- Describe the registries used in hospitals according to purpose, method of case definition and case finding, data collection methods, reporting and follow-up and pertinent laws regulations affecting registry operations.
- Discuss agencies for approval and education and certification for cancer, immunization, trauma registries.
- Identify and define characteristics of data quality as it relates to (computer) information systems.
- Perform database queries for research for special reports.
- Design forms displays for collection of data.
- Analyze data for presentations and presenting data professionally.
- Identify and apply methods to assist in computer report accuracy.
- Identify the key players in current efforts to develop standards for computer-based health records.
- Define the term health informatics standards and explain vocabulary standards, content structure standards, transmission standards, and security standards.
- Describe the value of written documents related to an HIM system or application, including policies, procedures, instructions, and data dictionary.

- Identify and describe hardware components of a computerized information system, including electronic data entry technology, central processing unit, and output.
- Select data sets and/or standards appropriate for specific care settings for use in developing health records and health information systems.
- Discuss the three major functions of an information system.
- Compare the functions of systems analysis with the functions of system design.
- Identify four criteria used to evaluate an information system.
- Explain the concepts of computer communications, local area networking, wide area networking, client-server technology, Internet, and intranet.
- Describe the four primary components of the security provisions of the Health Insurance Portability and Accountability Act.
- Understand the difference between structured and unstructured decisions.
- List the necessary components of an optical imaging system and the various cost factors involved in implementing an optical imaging system.
- Identify possible steps in the implementation of an optical imaging system.

Major Topics to be Included

- a. Introduction to Healthcare Information Systems
- b. Fundamentals of Information Systems
- c. Information Systems for Managerial and Clinical Support
- d. Information Security
- e. Electronic Health Record
- f. Tumor Registries
- g. Information Systems Life Cycle
- h. EMR versus the traditional PMR