Common Course Outline
HIIT 130
Computer Applications for Health Data Analysis
3 Credits

Community College of Baltimore County

Description

HIIT 130 – Computer Applications for Health Data Analysis provides an overview of health informatics and examines the impact of information technology on the healthcare industry. This course provides hands-on spreadsheet and database health-context applications to enable students to organize, analyze, and manage data. Students learn to transform data into information for presentation and decision-making.

3 Credits: 2 lecture hours, 2 lab hours

Prerequisites: MATH 153, CSIT 101, and HIIT 101

Overall Course Objectives

Upon completion of this course students will be able to:
1. describe how technology enhances health data analysis;
2. differentiate among various types of clinical and administrative health support software;
3. discuss how technology has transformed clinical and administrative healthcare fields;
4. describe the advantages of converting patient records to an electronic format;
5. identify threats to information quality, availability, and confidentiality;
6. examine health data sets that healthcare facilities and insurance companies track for analysis;
7. discuss emerging trends affecting the development of health information systems;
8. differentiate among commonly used statistical measures in healthcare;
9. validate the reliability of secondary data sources;
10. perform database queries;
11. create relationships between database tables;
12. generate reports and charts from a database;
13. import and export health data in a database;
14. utilize statistical and logical functions in Excel to interpret health data;
15. summarize data with charts and pivot tables; and
16. evaluate and present trends in health data.

Major Topics
I. Informatics in Healthcare Professions
II. Information and Technology Systems

III. Electronic Health Information Systems
    A. Electronic Health Record
    B. Role of Technology and Standards
    C. Emerging trends
IV. Data Sources
    A. Centers for Disease Control
    B. Centers for Medicare and Medicaid Services
    C. National Center for Health Statistics
    D. Agency for Healthcare Research and Quality
    E. National Institutes of Health
V. Administrative and Clinical Data Sets
VI. Microsoft Access
VII. Microsoft Excel
VIII. Data Presentation to Support Analysis

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams
- A minimum of 2 weekly assignments to include case studies
- A minimum of 2 graded discussion board assignments
- A minimum of 4 quizzes
- Written research project with data presentation, minimum 750 words
- Midterm exam
- Comprehensive final exam

Written Assignments: Students are required to use appropriate academic resources.

Date Revised: 05/04/2017