

**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.