

Course discipline/number/title: HIMC 2710: Healthcare Data Analysis

A. CATALOG DESCRIPTION

1. Credits: 3
2. Hours/Week: 2 Lecture, 2 lab
3. Prerequisites (Course discipline/number): AOP 2350/BTEC 2355
4. Other requirements: College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better.
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION This course is a study of collecting, analyzing, interpreting, and presenting numerical data relating to health care services. The electronic patient record requires the health information management professional to apply computer software using spreadsheet, database, and presentational software to convey healthcare information to stakeholders. College level reading skills, appropriate score on RCTC placement test or completion of appropriate developmental course with grade of C or better.

C. DATE LAST REVISED (Month, year): February, 2019

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Descriptive Statistics
  - a) Frequency distribution
  - b) Measures of central tendency
  - c) Measures of variation
  - d) Range
  - e) Variance
  - f) Standard deviation
2. Inferential Statistics
  - a) Standard error of the mean
  - b) Confidence intervals
  - c) Null hypothesis
  - d) ANOVA
  - e) Chi-square
3. Mathematics review
  - a) Rounding
  - b) Percentage
  - c) Ratio
  - d) Averages
4. Presentation of Data
5. Data Analytics
  - a) Types of data analytics
6. Patient Census
7. Percentage of Occupancy
8. Length of Stay
9. Death (Mortality) Rates
10. Hospital Autopsies and Autopsy Rates
11. Morbidity Rates
12. Health Information Statistics
13. Budgets
  - a) Operational budget
  - b) Capital budget

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Apply policies and procedures to ensure the accuracy and integrity of health data.
2. Collect and maintain health data.
3. Apply graphical tools for data presentations.



- E. **LEARNING OUTCOMES (GENERAL):** The student will be able to: Continue. . .
4. Explain analytics and decision support.
  5. Apply report generation technologies to facilitate decision-making.
  6. Utilize basic descriptive, institutional, and healthcare statistics.
  7. Analyze data to identify trends.
  8. Apply policies and procedures to ensure the accuracy and integrity of health data both internal and external to the health system.
  9. Utilize data for facility-wide outcomes reporting for quality management and performance improvement.
  10. Plan budgets,
  11. Explain accounting methodologies.
  12. Explain budget variances.
- F. **LEARNING OUTCOMES (MNTC):** NA
- G. **METHODS FOR EVALUATION OF STUDENT LEARNING:** Methods may include but are not limited to:
1. Textbook assignments
  2. Application projects
  3. Discussions
  4. Tests
- H. **RCTC CORE OUTCOME(S).** This course contributes to meeting the following RCTC Core Outcome(s): Communication. Students will communicate appropriately for their respective audiences.
- I. **SPECIAL INFORMATION (if any):** None