

2013

490 Analysis of Health Care Information

Linda Schmid
schmid@xavier.edu

Follow this and additional works at: http://www.exhibit.xavier.edu/nursing_syllabi_fall_2013

Recommended Citation

Schmid, Linda, "490 Analysis of Health Care Information" (2013). *Nursing Syllabi Fall 2013*. 47.
http://www.exhibit.xavier.edu/nursing_syllabi_fall_2013/47

This Restricted-Access Syllabus is brought to you for free and open access by the Nursing Syllabi 2013 at Exhibit. It has been accepted for inclusion in Nursing Syllabi Fall 2013 by an authorized administrator of Exhibit. For more information, please contact exhibit@xavier.edu.

XAVIER UNIVERSITY
COLLEGE OF SOCIAL SCIENCES, HEALTH, AND EDUCATION
SCHOOL OF NURSING

Fall 2013

Course Number and Title: NURS 490 Analysis of Health Care Information

Number of Credits: 3

Pre-requisites: None

Co-requisites: None

Course Description:

This course is intended to provide students in healthcare disciplines with a basic knowledge of biostatistical methods utilized in health care research. The content of this course will assist the student to utilize these biostatistical methods to analyze and interpret pertinent health care research. The healthcare biostatistical methods that will be explored include scales of measurement, presentation of data, measures of central tendency, measures of variability, probability, and descriptive and inferential biostatistical methods. Testing of pertinent healthcare hypothesis and strength of relationships will be explored. Analysis of pertinent healthcare research studies will be conducted.

Course Objectives:

1. Apply knowledge of biostatistical methods when exploring pertinent health care research.
2. Identify the appropriate use of biostatistical methods utilized in health care research.
3. Interpret the graphic presentation of data utilized in health care research.
4. Analyze the results of pertinent health care hypothesis testing to ascertain the appropriateness of the researcher's conclusions.

Location and Time: Monday, 4:30 PM to 7:15 PM
TBA

Faculty: Linda Schmid, PhD, RN
125 Cohen, 745-4232
E-Mail: Schmid@xavier.edu
Office Hours: By appointment

Textbook:

Pyrczak, F. (2009). *Success at statistics: A worktext with humor*. (3rd ed.) Glendale, CA: Pyrczak Publishing.

*Published healthcare research studies will be used for analysis of the researcher's appropriate utilization of biostatistical methods and means of reporting data.

Course Outline:

- 1) Analysis of Scales of Measurement Utilized in Healthcare Research
 - a) Nominal Healthcare Data
 - b) Ordinal Healthcare Data
 - c) Interval Healthcare Data
 - d) Ratio Healthcare Data
- 2) Presentation of Data Collected via Healthcare Research
 - a) Table
 - b) Chart
 - c) Histogram
 - d) Polygon
- 3) Analysis of Pertinent Descriptive Biostatistical Methods Utilized in Healthcare Research
 - a) Utilization of Frequency Distributions in Reporting of Healthcare Data
 - b) Utilization of Percentages in Reporting of Healthcare Data
 - c) Analysis of Percentiles found in Healthcare Research
 - d) Utilization of Measures of Central Tendencies for Reporting of Healthcare Data
 - i) Mean
 - ii) Median
 - iii) Mode
 - e) Utilization of Measures of Variability Found in Healthcare Research Studies
 - i) Range
 - ii) Standard Deviation
 - f) Analysis of Linear Regression Utilized in Healthcare Research Studies
- 4) Analysis of Inferential Biostatistical Methods Utilized in Pertinent Healthcare Research
 - a) Analysis of Healthcare Research Endeavors Utilizing Probability Biostatistical Methods
 - b) Analysis of Standard Error within Healthcare Research Studies
 - i) Type 1
 - ii) Type 2
 - c) Analysis of Utilization of Power to Assess Healthcare Research Sampling Needs
 - d) Analysis of Healthcare Research Utilizing Standard Scores (t or z scores)
 - e) Analysis of Healthcare Research Endeavors Utilizing Hypothesis Testing Biostatistical Methods
 - i) Parametric Tests
 - (1) T tests
 - (2) ANOVA
 - ii) Nonparametric Tests
 - (1) Chi Square
 - f) Analysis of Pertinent Healthcare Research Studies Utilizing Biostatistical Methods to Illustrate Strength of Relationship
 - i) Correlation coefficients
 - ii) Pearson's "r" correlation

Methods of Instruction:

Lecture, discussion, weekly assignments, and analysis of published healthcare research studies.

Methods of Evaluation:

Analysis of Published Healthcare Research Assignments	20%
Exam 1	20%
Exam 2	20%
Exam 3	20%
Exam 4	20%
Total	100%

Grading Scale:

100 – 90	A
89 – 80	B
79 – 70	C
69-60	D
Below 60	F

Analysis of Published Healthcare Research Assignments:

Published healthcare research articles will be assigned to students for analysis. These articles are to be analyzed using the assigned worksheet provided for each article. Each student will need to **submit via e-mail** each completed worksheet at the assigned times. Each question in the specific worksheet will be worth one point toward the total value of the worksheet. Each worksheet will be assigned an average and at the end of the semester all of these will be added together to compute the final grade for this assignment.

Attendance Policy:

Reasonable attendance at all class meetings is expected. If a student is unable to attend a class the responsibility of missed class content is the sole responsibility of the student. Tests and written assignments may include content covered in class or in assigned readings.

Caveat:

The schedule and procedure in this course are subject to change in the event of extenuating circumstances as well as class learning needs and desires.