

**GOVERNORS STATE UNIVERSITY  
COLLEGE OF HEALTH PROFESSIONS  
HEALTH ADMINISTRATION**

**SYLLABUS**

**COURSE TITLE:** APPLIED RESEARCH METHODS FOR HEALTH  
ADMINISTRATION

**COURSE NUMBER:** HLAD 705

**INSTRUCTOR:** Ralph Bell, Ph.D.

**TRIMESTER OFFERED:** AY 1999-2000

**COURSE DESCRIPTION:**

This course examines the application of research methods and measurement to the administrative decision-making process. Topics covered include: the relevance of research for decision-making, common measures and statistics used by health care administrators, various research strategies applicable to the administrative process, measures for quality, and ethical issues in research.

**PREREQUISITES:**

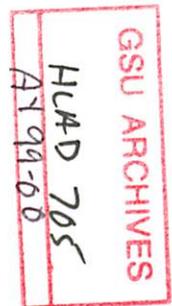
Statistics or instructor's permission.

**COURSE RATIONALE:**

Health administrators are called upon daily to make rational decisions that affect the functioning of their organizations. In order to make the appropriate decisions, administrators need timely, pertinent data and information on which to base those decisions. Often, this means that they must collect their own data to answer questions and solve problems. Therefore, it is imperative that administrators know how to collect relevant data and how to analyze them in order to reach the best possible decision given the circumstances. This course is designed to provide students with the basic knowledge of research methods available to accomplish this task.

**INTENDED AUDIENCE:**

Graduate students in the health administration program.



**COMPETENCIES:**

Upon completion of this course, the student will be able to:

1. Calculate and interpret measures commonly used by health administrators.
2. Use program monitoring techniques to make decisions relating to organizational Improvements.
3. Understand the necessity for collecting, analyzing, and interpreting information to make rational decisions.
4. Select the proper research method to collect data given the situation.
5. Select, use, and interpret the proper statistical technique given the situational context.
6. Understand the importance of outcomes data in making organizational decisions and improvement.
7. Understand the basic statistical approaches to performance enhancement.
8. Understand the ethics of conducting health services research.

**APPROACH TO THE COURSE:**

This course will follow a lecture/discussion format. Students are encouraged to ask questions concerning any of the course material. Because of the technical nature of the material, students must read the assigned materials prior to class meetings to ensure a minimal base of shared knowledge.

**REQUIREMENTS:**

There will be an in-class midterm examination and a take home final. The midterm counts toward 40% of the final grade with the final worth the remaining 60%. The midterm will be comprised of short answer questions; the final exam will be a lengthy research proposal focusing on a organizational scenario. Final letter grades for the course will be assigned based on the following scale:

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

Late final exams will automatically lose 5 points per day. No incomplete grades (I) will be granted for this course.

### **REQUIRED TEXTS / READINGS:**

Veney, James E. and Arnold D. Kaluzny. **Evaluation and Decision making for Health Services, Third Edition**, Chicago: Health Administration Press, 1998.

### **TOPIC 1: MANAGEMENT USES OF RESEARCH**

#### **Rationale:**

Despite the need for relevant research findings, managers and policy makers often ignore potentially useful results. The primary reason for this occurrence stems from the differential definition of what constitutes “good” research by different users. This topic focuses on how we can make research results more readily useful to administrators and policy makers.

#### **Instructional Objectives:**

The following topics will be discussed:

1. Use and non-use of research findings
2. The link between researchers and managers
3. Alternative strategies for improving the use of research results

#### **Readings:**

Eisenberg, J.M., "Health services research in a market-oriented health care system".  
*Health Affairs*, 17(1): 98-108, 1998.

Veney and Kaluzny Chapters 1 and 2

### **TOPIC 2: USEFUL STATISTICS FOR HEALTH ADMINISTRATORS**

#### **Rationale:**

This topic covers a review of basic statistical techniques and commonly used descriptive health care measures.

**Instructional Objectives:**

The following topics will be discussed:

1. Levels of measurement
2. Basic descriptive statistics (e.g., mean, median, mode, standard deviation, variance, skewness, kurtosis)
3. Patient origin studies
4. Calculating penetration rates
5. Basic descriptive measures of health care utilization

**Readings:**

Veney and Kaluzny Chapter 13

**TOPIC 3: MONITORING TECHNIQUES****Rationale:**

Monitoring is defined as the comparison between a plan and reality. Monitoring techniques are used to determine whether a program is operating the way it was planned, whether it is proceeding on time and whether it is being developed in the proper sequence. Discrepancies uncovered during monitoring can assist an administrator in his/her decision making process relating to performance improvement. The tools used for planning and monitoring are discussed in detail.

**Instructional Objectives:**

The following topics will be discussed:

1. Program planning
2. Flow Charting
3. PERT network fundamentals and analysis
4. Gantt Charts
5. Control Charts

**Readings:**

Veney and Kaluzny Chapters 3 and 4

## **TOPIC 4: THE CASE STUDY APPROACH**

### **Rationale:**

Often, administrators require detailed information on a single unit or a small number of like units. The case study approach provides a simple, yet exhaustive and flexible method to collect and analyze data in these situations.

### **Instructional Objectives:**

The following topics will be discussed:

1. The basics of the case study approach
2. Using existing data
3. Methods of primary data collection
4. Nominal Group Technique
5. Fishbone Diagrams
6. Pareto Charts
7. Interviewing techniques
8. Delphi studies

### **Readings:**

Iezzoni, L.I., "Assessing quality using administrative data". *Annals of Internal Medicine*, 127(4): 666-674, 1997.

Veney and Kaluzny Chapters 5 and 6

## **TOPIC 5: EXPERIMENTAL DESIGNS**

### **Rationale:**

Experimental designs have a long history in health care and are generally assumed to be the best way to establish causality. There are a number of pitfalls associated with experimental research, however. They are often difficult to design, implement and monitor. Administrators must have a basic understanding of how experiments are conducted because of their fundamental importance to advancing medical science and technology.

### **Instructional Objectives:**

The following topics will be discussed:

1. The basics of experimental designs
2. Problems and pitfalls associated with experiments

3. Types of experimental designs
4. Statistical analyses generally associated with experimental designs
5. Ethical considerations in conducting experiments
6. T-test
7. ANOVA/ F-Ratio
8. Hypothesis testing

**Readings:**

Veney and Kaluzny Chapters 11 and 12

Mariner, W.K., "Public confidence in public health research", *Public Health Reports*, 112(1): 33-36, 1997.

**TOPIC 6: SURVEY RESEARCH**

**Rationale:**

The use of survey research by health care organizations has been increasing over recent years. To collect data on levels of patient satisfaction, employee satisfaction, or community knowledge of an organization's services can be best accomplished using the survey approach. Even if surveys are outsourced, it is imperative that administrator have a solid understanding of the issues surrounding survey research.

**Instructional Objectives:**

The following topics will be discussed:

1. The basics of survey research
2. Steps involved in conducting a survey
3. Types of surveys
4. Types of samples
5. Statistical analyses generally associated with survey research
6. Ethical considerations
7. Chi-square
8. Correlation
9. Simple regression
10. Multiple regression

**Readings:**

Andrzejewski, N. and R.T. Laguna, "Use of customer satisfaction survey by health care Regulators: a tool for quality management", *Public Health Reports*, 112(2): 206-210, 1997.

Veney and Kaluzny Chapters 7, 8, and 15

### **TOPIC 7: TREND ANALYSIS**

#### **Rationale:**

Often, an administrator needs to examine changes in a measure over time to determine past trends and to predict future performance. Techniques of examining change within the context of time are discussed.

#### **Instructional Objectives:**

The following topics will be discussed:

1. The basics of trend analysis
2. Graphical presentation of trends
3. Statistical analyses of trend data
4. Correcting for seasonal variation
5. Regression approaches to forecasting

#### **Readings:**

Veney and Kaluzny Chapters 9 and 10

### **TOPIC 8: DEMOGRAPHIC AND EPIDEMIOLOGICAL METHODS**

#### **Rationale:**

Demographic and epidemiological data have become indispensable sources of input to the administrative decision making process. Understanding the basics of the approaches used by health demographers and epidemiologists can help make decisions with incomplete data.

#### **Instructional Objectives:**

The following topics will be discussed;

1. Sources of demographic and epidemiological data
2. Measures of mortality and morbidity
3. Direct and indirect standardization procedures

**Readings:**

Bell, R., "Social epidemiology". Pp. 1793-1798 in N.F. Magill (Ed.) **Survey of Social Science: Sociology**. Pasadena: Salem Press, 1994.

Carson, C.A. and S.L. Zucconi, "Epidemiologic indicators of health status to guide health Care management decision making", *Journal of Health Administration Education*, 11(4): 551-562, 1993.

MacDowell, N.M. and J. Lutz, "Applications of epidemiology in the operation and marketing of managed care plans", *Journal of Health Administration Education*, 11(4): 541-550, 1993.

Oleske, D. M., "Linking the delivery of health care to service population needs: the role of the epidemiologist on the health care management team", *Journal of Health Administration*, 11(4): 531-540, 1993.

**TOPIC 9: MEASURING OUTCOMES****Rationale:**

Over the past few years, the health care field has undergone a dramatic shift in focus away from measuring the process of care towards measuring the outcomes of care. Considerable pressures exist, from many sources, on administrators to develop solid outcomes measurement programs.

**Instructional Objective:**

The following topics will be discussed:

1. Defining outcomes
2. Operationalizing and measuring outcomes
3. Using outcomes to improve quality
4. Problems and pitfalls associated with outcomes measurement

**Readings:**

"The nuts and bolts of outcomes management". *Business and Health*, Special Report 14 (Supplement B), 1996.

## ADDITIONAL SUGGESTED READINGS AND REFERENCES

Aday, L.A., **Designing and Conducting Health Surveys**. San Francisco: Jossey-Bass, 1989.

Bickman, L., **Handbook of Applied Social Research Methods**. London: Sage, 1997.

Broyles, R.W. and C.M. Lay, **Statistics in Health Administration, Volumes I and II**. Germantown: Aspen, 1979.

Kuzma, J.W., **Basic Statistics for the Health Sciences**. Mountain View: Mayfield, 1992.

Locke, L.F. and S.J. Silverman, **Reading and Understanding Research**. London: Sage, 1998.

Monette, D.R., T.J. Sullivan, and C.R. DeJong, **Applied Social Research: Tool for the Human Services**. Fort Worth: Holt, Rinehart, and Winston, 1990.

Shi, L., **Health Services Research Methods**. Albany: Delmar, 1997.

Vogt, W.P., **Dictionary of Statistics and Methodology**. London: Sage, 1998.