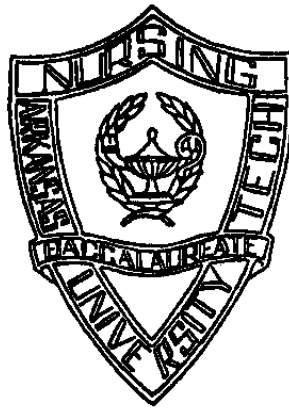


ARKANSAS TECH UNIVERSITY

DEPARTMENT OF NURSING

NURSING RESEARCH

NUR 4303



Fall 2009

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## DEPARTMENT OF NURSING

**Course:** NUR 4303  
**Course Title:** NURSING RESEARCH  
**Credit Hours:** THREE (3) HOURS  
**Contact Hours:** THREE (3) HOURS  
**Placement:** SENIOR YEAR

### **Instructors:**

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### **Course Description:**

An introductory research course, which focuses on the validity and applicability of research findings for the improvement of nursing practice. Emphasis is on scientific inquiry and the role of the nurse as an intelligent consumer of research. Decision-making and critical thinking skills are a major component of the course. The language of research, types of research designs, data collection, and descriptive statistics are studied. Ethics relating to the role of the researcher and the rights of human subjects is stressed. Each student will critically analyze selected research studies relating to clinical practice. The course will culminate in a written research project by each student.

### **Instructional Resources**

#### Required Textbooks:

Retain textbooks from previous nursing courses.

#### Additional Texts:

Polit, D., & Beck, C. (2006). Essentials of nursing research: Methods, appraisal, and utilization. (6th ed.), Philadelphia: J. B. Lippincott.

Polit, D., & Beck, C. (2006). Study guide to accompany: Essentials of Nursing Research, Philadelphia: J. B. Lippincott.

## **Additional Resources:**

### I. Nursing Indexes:

- Cumulative Index of Nursing
- Literature International Nursing Index
- Nursing Research Index (End of year issue of Nursing Research)
- The Nursing Studies Index

### II. Journals:

- Advances in Nursing Science
- American Journal of Nursing
- American Journal of Public Health
- Applied Nursing Research
- Health Care
- Health Services Research
- Hospitals
- Journal of Nursing Education
- Journal of Nursing Scholarship
- Medical Care
- Nursing Forum
- Nursing Outlook
- Nursing Science Quarterly
- Nursing Research
- Perspective in Psychiatric Care
- Western Journal of Nursing Research

### III. Publication Catalogs:

- American Hospital Association
- American Nurses' Association National League for Nursing
- U.S. Department of Health and Human Services

### IV. Regional Research:

- SNRS
- SREB
- WICHE

### V. Other:

- Bibliographies
  - Bioethics, Suicide, Alcoholism, Death and Dying, Gerontology
- CINHAL
- Educational Resources Information Center (ERIC)
  - includes: (Current Index to Journals in Education)
  - (Exceptional Child Abstracts)
  - (Research in Education)
- Hospital Literature Index Guide
- Index Medicus
- Medline (Computer Literature)
- Psychological Abstracts
- Science Citation Index (SCISEARCH)

## VI. Sources of Numerical Data:

Census Data  
Health Manpower Publications  
Hospital Guides  
Professional Organization Catalogs

### **Justification/Rationale for the Course**

By the completion of this course the student will progress toward program goals/outcomes 1, 2, 3, and 4.

This upper division professional nursing course provides opportunities for the student to apply knowledge and skills from the general education component and from nursing courses to the care of individuals, families and communities.

### **Course Objectives:**

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

1. Describe the development of research in nursing.
2. Analyze the role of the baccalaureate nurse as an informed consumer of research.
3. Identify the moral, legal, and ethical factors affecting nursing research.
4. Critically analyze selected research studies for applicability to nursing practice.
5. Evaluate the effects of research on the nursing profession and its future development.
6. Describe quantitative and qualitative research methods.
7. Apply critical thinking in the evaluation of selected research.

**Evaluation:**

1. Grading Scale
  - A = 90-100
  - B = 80-89
  - C = 75-79
  - D = 68-74
  - F = 67 and Below
2. A grade of "C" or above must be achieved in every nursing course in order to progress in the Nursing Program. Any grade below 75% will not be rounded up.
3. A grade in "I" may be recorded for a student whose work is incomplete due to circumstances beyond the student's control. The student must take responsibility for removal of the incomplete grade according to the Arkansas Tech University's catalog requirements.
4. Examinations will be taken at designated times. If a student cannot take the examination at the regularly scheduled time, he/she is responsible for contacting the instructor prior to the examination as soon as possible. Makeup examinations will be essay or objective in nature at the discretion of the instructor.
5. Course Grade

The grade will be based upon four examinations, pop quizzes, a written research article critique presented to the class, and a written research proposal.

Exam I.....	15%
Exam II.....	15%
Exam III.....	15%
Exam IV.....	15%
Article Critique.....	20%
Research Proposal or Poster Presentation.....	15%
Quizzes .....	5%

Refer to the guidelines for development of the Article Critique and the Research Proposal.

## CONDUCT OF THE COURSE

### Assessment Methods:

**Teacher Role:** Facilitator, Evaluator, and Resource Person.

**Student Role:** Learner, Researcher, and Communicator.

### Teaching-Learning Strategies:

Lecture, discussion, on-line modules, student presentations, student critiques of selected research studies, and computer literature search technique.

## POLICIES

### Class Attendance:

1. Regular class attendance is considered essential if students are to receive maximum benefits from the course. The student's responsibility is to meet all classes as scheduled and on time. Control of class attendance is vested in the instructor.

If a consistent pattern of absences from class develops, the faculty and/or the level/team member will deal with the situation. Refer to the section on class absences in the Arkansas Tech University Catalog for further information.

2. Students are responsible for material presented in class, readings, and other assignments.
3. Planned learning activities outside the classrooms are an integral part of the course. These activities will be announced at least three (3) weeks in advance and all students are expected to participate.

### Dress and Behavior:

1. The student is expected to dress appropriately while attending classes.
2. Tobacco products are not permitted in any classroom.

## TOPICAL OUTLINE

NUR 4303

### NURSING RESEARCH

- I. Introduction to Nursing Research
- II. Overview of the Research Process
- III. Research Problems & Hypotheses
- IV. Conceptual Context for Research Problems
- V. Ethical Issues in Nursing Research
- VI. Research Designs
- VII. Sampling
- VIII. Methods of Data Collection
- IX. Data Quality
- X. Analysis of Data
- XI. Evaluating Nursing Research Studies

**NUR 4303 NURSING RESEARCH**  
**UNIT I - Introduction to Nursing Research**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Define research.</p> <p>2. Relate the influence of research to nursing practice.</p> <p>3. Describe the role of the B.S.N. in nursing research.</p> <p>4. Outline the history of nursing research.</p> <p>5. Discuss paradigms for nursing research.</p> <p>6. Differentiate between quantitative research and qualitative research.</p> <p>7. Discuss the major characteristics, purposes and uses of research.</p> <p>8. Differentiate between basic and applied research.</p> <p>9. Discuss limitations of the scientific approach to inquiry.</p> <p>10. Discuss the ANA Cabinet on Nursing Research list of research priorities.</p>	<p>Nursing research</p> <p>Historical evolution contribution- Florence Nightingale</p> <p>Role of Consumer</p> <p>Evaluation of research</p> <p>Problem identification</p> <p>Research utilization</p> <p>Communication of findings</p> <p>Early studies</p> <p>Florence Nightingale</p> <p>Focus on nurses/nursing</p> <p>National Center for Nursing Research</p> <p>Focus on clinical problems</p> <p>ANA and NLN recommendations on research preparation</p> <p>CORP</p> <p>NIH Priorities</p> <p>Future directions</p> <p>Positivist paradigm</p> <p>Naturalistic paradigm</p> <p>Scientific inquiry</p> <p>Source of evidence for nursing practice</p> <p>Tradition</p> <p>Authority</p> <p>Trial and Error</p> <p>Personal Experience</p> <p>Logical reasoning</p> <p>Inductive reasoning</p> <p>Deductive reasoning</p> <p>Disciplined Research</p> <p>Purposes of scientific research</p> <p>Identification</p> <p>Description</p> <p>Exploration</p> <p>Explanation</p> <p>Prediction - control</p> <p>Commonalities - Differences</p> <p>Basic research</p> <p>Applied research</p> <p>Flawed studies</p> <p>Human complexity</p> <p>Measurement problems</p> <p>Control problems</p>	<p><b>Required Reading:</b> Polit, &amp; Beck, Ch. 1</p> <p><b>Study Guide</b> Complete exercise Ch. 1 A,B, C</p> <p><b>On-line Modules</b> Unit 1, Parts 1 and 2</p>

**NURSING RESEARCH  
REVIEW WORKSHEET**

1. Develop a time line (on computer paper provided) that traces the evolution of nursing research since Florence Nightingale. Include critical events during each time period.

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Flo. Night.	1900-1940	1950's	1960's	1970's	1980	1990 to present
<ol style="list-style-type: none"> <li>a. When did nursing research focus on nurses?</li> <li>b. When did research begin to focus primarily on clinical problems?</li> <li>c. When was the National Center for Nursing Research at the National Institutes of Health established?</li> <li>d. When did NCNR become the National Institute for Nursing Research?</li> <li>e. When was the professional journal "Nursing Research" created?</li> <li>f. When did nurses begin to pay more attention to the utilization of research findings?</li> </ol>						

2. Summarize the Priorities for Research established by the NCNR CORP.

3. Summarize the goals established by NINR for the 5-year period 2000-2004.

**NUR 4303 NURSING RESEARCH**  
**UNIT II - Overview of the Research Process**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Demonstrate a knowledge of basic research terminology in written work and classroom discussions.</p> <p>2. Explain the steps of the research process.</p>	<p>Research terminology</p> <p>The Study</p> <p>Phenomena, Concepts,  Constructs</p> <p>Theory</p> <p>Variables</p> <p>Operational definitions</p> <p>Data</p> <p>Relationships</p> <p>Quantitative Studies</p> <p>Conceptual Phase</p> <p>Design and Planning  Phase</p> <p>Empirical Phase</p> <p>Analytic Phase</p> <p>Dissemination Phase</p> <p>Qualitative Studies</p> <p>Conceptualizing and  Planning</p> <p>Conducting the Study</p> <p>Disseminating Findings</p> <p>Review</p>	<p><b><u>Required Readings:</u></b></p> <p><b>Polit &amp; Beck Ch.2, Ch.3</b></p> <p><b><u>Study Guide</u></b></p> <p>Complete Study Guide  Exercises Ch.3B, C2, C3,  C4, D1</p> <p><b><u>On-line Modules</u></b></p> <p>Unit 2</p>

## NUR 4303 NURSING RESEARCH

### UNIT II - Overview of the Research Process – Reading Research Reports

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
3. Identify types of research reports	Conference proceedings Journal articles	<b><u>Required Reading:</u></b> Polit & Beck Ch. 4.
4. Describe the content of a research report.	Abstract Introduction Methodology Results Discussion References	<b><u>Study Guide:</u></b> Complete Study Guide Exercises Ch. 4B, C, #2, 5, D1.  <b><u>On-line Module</u></b> Unit 2
5. Identify characteristics of research journal articles.	Compactness Language Objectivity Statistical information	
6. List tips for reading, summarizing, and critiquing research reports.	Reading Summarizing Critiquing	

## NUR 4303 - NURSING RESEARCH

### UNIT III -The Research Process - Research Problems, Questions, and Hypotheses

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
1. Identify a nursing research topic of interest.	Nursing research problems Sources	<b>Required Reading:</b> Polit & Beck, Ch. 6
2. Develop a problem statement for the above that is researchable and feasible.	Developing the problem Criteria for evaluating the problem Research ability Feasibility Individual interest Significance to nursing practice	<b>Study Guide</b> Complete Study Guide Exercises Ch. 6 A, B, C 2-6.
3. Define the terms in the problem statement.		<b>On-line Module</b> Unit 3
4. Explain the two common forms of a problem statement.	Declarative Interrogative	
5. Define the term "hypothesis".	Hypothesis development	
6. Compare and contrast six (6) major types of hypothesis giving an example of each.	Simple/Complex Directional/Non-Directional Research/Statistical	
7. Construct a testable hypothesis related to a problem area in nursing practice. (Discuss in class)  Develop operational definitions of all ambiguous terms.	Variables Types Characteristics	

**NUR 4303 - NURSING RESEARCH**  
**UNIT IV - Conceptual Context for Research Problems**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Describe purposes, scope, and sources of a literature review.</p> <p>2. Critique the contents of a literature review from selected nursing research articles.</p> <p>3. Discuss writing a literature review</p> <p>4. Discuss two (2) major factors, which influenced theory development and research in nursing science.</p> <p>5. Identify several purposes of theories.</p> <p>6. Outline the major characteristics of a theory.</p> <p>7. Demonstrate an understanding of levels of theory development by:</p> <p>a. describing relationships among them</p> <p>b. differentiating between inductive and deductive reasoning</p> <p>c. listing criteria for determining their effectiveness</p> <p>8. Distinguish between macro theories and middle-range theories.</p>	<p>Functions of the review of literature            Replication of studies            Assumptions            Selecting a research strategy            Major sources of a literature review            Primary            Secondary            Bibliographical            Nursing indexes            Abstracts            Computer sources</p> <p>Scientific method Phenomenological method</p> <p>Summarize existing knowledge            Explain observations            Predict and control            Outcomes            Stimulate new research</p> <p>Concepts            Propositions of relationships among concepts            Deduction of new statements from Propositions</p> <p>Levels of theory development            Factor searching            Relation searching            Association testing            Causal hypothesis            Prescriptive            Steps in the scientific method</p>	<p><b>Required Reading:</b>            Polit &amp; Beck, Ch.7-8</p> <p><b>Class Activity</b>            Literature search            Computer experience            Pendergraf Library and Technology Center</p> <p><b>Study Guide:</b>            Complete Study Guide            Exercises Ch. 7 B and C.            Exercises Ch. 8 B and C#1.</p> <p><b>On-line Module</b>            Unit 4</p>

## NUR 4303 - NURSING RESEARCH

### UNIT IV - Conceptual Context for Research Problems (Continued)

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
9. Identify the four central concepts in nursing.	<ol style="list-style-type: none"> <li>1. Man</li> <li>2. Environment</li> <li>3. Health</li> <li>4. Nursing</li> </ol>	
10. Distinguish between theories and conceptual frameworks.		
11. Discuss the dependent relationship between theory and nursing research.	<p>Theory as basis for research            Research findings contribute to theory            Development</p>	
12. Define the term "model" as it relates to nursing theory.	<p>Schematic            Statistical</p>	
13. Explain the effect of specific nursing conceptual frameworks on nursing practice and education.	<p>Environment/systems/human            Interactions - Johnson - Neuman -            King – Parse - Rogers            Nursing practice - King - Orem -            Levine – Newman            Adaptation - Roy</p>	
14. Identify theories/ frameworks from other disciplines that could be useful in nursing research.	<p>Health Belief Model            Self-efficacy            Feminism            Phenomenology            Others: economics, management,            Psychology</p>	
15. Integrate a nursing conceptual framework into the development of a group research project.		

**NUR 4303 - NURSING RESEARCH**  
**UNIT V - Ethical Issues in Nursing Research**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Discuss examples from history of the unethical research studies.</p> <p>2. Describe the three primary ethical principles outlined in the Belmont Report.</p> <p>3. Describe the procedures for obtaining an informed consent.</p> <p>4. Discuss the specific measures the nurse can take to protect the rights of human subjects.</p> <p>5. In small group discussions, critically analyze the legal and ethical issues presented in selected nursing situations.</p> <p>Give the nurses responsibility in each situations.</p>	<p>Nazi medical experiments Tuskegee Syphilis Study</p> <p>Beneficence Freedom from harm Freedom from exploitation Respect for human dignity Right to self-determination Right to full disclosure Justice Right to fair treatment Right to privacy</p> <p>Communication Documentation</p> <p>Vulnerable groups Staff nurse as Client Advocate Role of review Committees Institutional Review Boards</p> <p>Group discussions Decision - making Client advocate Nurse as collaborator in research studies</p>	<p><b><u>Required Reading:</u></b> Polit &amp; Beck, Ch. 5</p> <p>NLN <u>Code of Ethics</u></p> <p><b><u>Suggested A/V:</u></b> View the movie, <u>Miss Ever's Boys</u></p> <p><b><u>Study Guide:</u></b> Complete Study Guide Exercises Ch. 5 C and D.</p> <p><b><u>On-line Module</u></b> Unit 5</p>

## NURSING RESEARCH GROUP WORK

Brenenstuhl (1991)\* investigated the behavior of nursing students in crisis or emergency situations. The investigator was interested in comparing the behaviors of students from B.S. versus diploma programs to determine the adequacy of the preparation given to students in handling emergencies. Fifty students from both types of programs volunteered to participate in the study. The investigator wanted to observe reactions to crises as they might occur naturally, so the participants were not told the exact nature of the study. Each student was instructed to perform a simple task, purportedly to investigate reaction time. A second person, who was described as another participant but who in fact was a confederate of the investigator, simulated an epileptic seizure during the "experiment". An assistant to the investigator, who was unaware of the purpose of the study and who did not know the educational background of the subjects, observed the timeliness and appropriateness of the students' responses through a one-way mirror. Subjects were not required to fill out forms in which their identities were divulged. Immediately following participation, subjects were debriefed as to the true nature of the study.

**DIRECTIONS:** Discuss the following questions in your groups.

1. Were the subjects of this study at risk of physical or psychological harm? Were they at risk of exploitation?
2. Did the subjects in the study derive any benefits from their participation? Did the nursing community or society at large benefit? How would you assess the risk/benefit ratio?
3. Were the subject's rights to self-determination violated? Was there any coercion involved? Was full disclosure made to subjects prior to participation? Was informed consent given to subjects and documented?
4. Were the subjects treated fairly? Was their right to privacy protected?
5. What ethical dilemmas does this study present? How, if at all, can the dilemmas be resolved? To what extent were they resolved?
6. What type of human subjects review would be appropriate for a study such as the one described?

\*This study is fictitious.

**NUR 4303 - NURSING RESEARCH**  
**UNIT VI - Research Designs - Quantitative**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Compare and contrast types of nursing research approaches</p>	<p>Quantitative research designs            Experiments (True and Quasi)            Randomized Clinical Trials            Nonexperimental            Survey            Field studies            Evaluation            Needs assessment            Historical            Case studies            Secondary analysis            Meta – analysis            Methodologic</p> <p>Qualitative research methods            Phenomenology            Grounded Theory            Ethnography</p>	<p><b>Required Reading:</b>            Polit &amp; Beck,            Ch. 9, 11</p> <p>Complete worksheet on Research Designs.</p> <p><b>Study Guide:</b>            Complete Study Guide Exercises            Ch. 9B, C#1-2, #4-5, D            Ch. 11B</p> <p><b>On-line Module</b>            Unit 6, Part 1, Modules 1-4</p>
<p>2. Differentiate research design by the time dimension.</p>	<p>Cross-sectional            Longitudinal</p>	
<p>3. Describe various aspects of research control</p>	<p>External factors            Intrinsic factors</p>	
<p>4. Distinguish between internal and external validity.</p>	<p>Appropriateness            Lack of bias            Precision            Power</p>	
<p>5. Discuss the characteristics of a good research design.</p>		

**Unit VI**

**ARKANSAS TECH UNIVERSITY  
Department of Nursing  
NUR 4303 Research Design  
Worksheet**

**DIRECTIONS:** Fill in the chart with information from Polit and Beck, Chapter 8.

<b>TYPE OF RESEARCH</b>	<b>DEFINITION</b>	<b>STRENGTHS</b>	<b>WEAKNESSES</b>
Survey			
Evaluations			
Outcomes Research			

**Department of Nursing  
NUR 4303 Research Design  
Worksheet (Continued)**

**DIRECTIONS:** Fill in the chart with information from Polit and Beck, Chapter 8

<b>TYPE OF RESEARCH</b>	<b>DEFINITION</b>	<b>STRENGTHS</b>	<b>WEAKNESSES</b>
Cross – Sectional Designs			
Longitudinal Designs			

**NUR 4303 - NURSING RESEARCH**  
**UNIT VI – Research Designs - Qualitative**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Describe the qualitative research traditions</p>	<p>Overview  Ethnography  Phenomenology  Grounded Theory</p>	<p><b><u>Required Reading:</u></b>  Polit &amp; Beck, Ch. 10  <b><u>Study Guide:</u></b>  Complete Study Guide  Ch. 10 A and B  <b><u>On-line Module</u></b>  Unit 6, Part 2, Qualitative Design</p>
<p>2. Describe characteristics of qualitative research design.</p>	<p>Characteristics  Planning qualitative studies  Phases</p>	
<p>3. Compare and contrast quantitative and qualitative research.</p>	<p>Control  Comparisons  Data Collection  Setting</p>	

**NUR 4303 - NURSING RESEARCH**  
**UNIT VII - Sampling**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Describe the rationale for sampling in research studies.</p> <p>2. Compare probability and nonprobability sampling.</p> <p>3. Describe the characteristics of a good sample based on sample size and sample selection.</p> <p>4. Describe sampling procedures for qualitative research.</p>	<p>Non probability sampling</p> <p>    Convenience</p> <p>    Quota</p> <p>    Purposive</p> <p>Probability sampling</p> <p>    Simple random</p> <p>    Stratified random</p> <p>    Cluster</p> <p>    Systematic</p>	<p><b><u>Required Reading:</u></b></p> <p>Polit &amp; Beck, Ch. 12.</p> <p><b><u>Study Guide:</u></b></p> <p>Complete Study Guide Exercises Ch. 12 A, B, C, D1 2</p> <p><b><u>On-line Module</u></b></p> <p>Unit 7, Parts 1 &amp; 2</p>

**NUR 4303 - NURSING RESEARCH**  
**UNIT VIII - Methods of Data Collection**

OBJECTIVES	CONTENT	LEARNING ACETIFIES
<p>1. Describe the major methods for the selection and construction of data collection tools listing advantages and disadvantages of each.</p> <p>2. In group discussion, evaluate the quality of the data collection tools used in selected nursing research studies.</p>	<p>Data Collection</p> <p>A. Self-report methods</p> <p>B. Scales Advantages</p> <p style="padding-left: 40px;">Likert</p> <p style="padding-left: 40px;">Cumulative</p> <p style="padding-left: 40px;">Semantic Differential</p> <p>C. Observational Methods</p> <p style="padding-left: 40px;">Relation to Nursing</p> <p style="padding-left: 80px;">Process</p> <p style="padding-left: 40px;">Observational techniques</p> <p style="padding-left: 60px;">a. Participant observation</p> <p style="padding-left: 100px;">Hawthorne effect</p> <p style="padding-left: 100px;">Play therapy</p> <p style="padding-left: 60px;">b. Check lists</p> <p style="padding-left: 60px;">c. Psychological Measures</p> <p>D. Biophysical Methods</p> <p style="padding-left: 40px;">Body systems functions</p> <p style="padding-left: 40px;">Blood pressure</p> <p style="padding-left: 40px;">Respiratory</p> <p>Article discussion</p>	<p><b><u>Required Reading:</u></b>            Polit &amp; Beck, Ch. 13.</p> <p><b><u>Study Guide:</u></b>            Complete Study Guide            Exercises Ch. 13 A, B, and C4.</p> <p><b><u>On-line Module</u></b>            Unit 8, Parts 1 and 2</p>

**NUR 4303 - NURSING RESEARCH**  
**UNIT IX – Data Quality**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Describe characteristics of measurement.</p> <p>2. Identify sources of measurement error.</p> <p>3. Describe three aspects of reliability.</p> <p>4. Define validity</p> <p>5. Describe assessment issues in qualitative research.</p>	<p>Quantification</p> <p>Stability            Internal consistency            Equivalence</p> <p>Face            Content            Criterion related                Predictive                Concurrent</p> <p>Construct            Interpretation</p> <p>Credibility            Dependability            Confirmability            Transferability</p>	<p><b><u>Required Reading:</u></b>            Polit &amp; Beck, Ch. 14.</p> <p><b><u>Study Guide:</u></b>            Complete Exercises Ch. 14 A, B, and C.</p> <p><b><u>On-line Module</u></b>            Unit 9, Parts 1 and 2</p>

**NUR 4303 - NURSING RESEARCH**  
**UNIT X - Analysis of Data**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
<p>1. Compare the levels of measurement.</p> <p>2. Discuss the major statistical methods for evaluating, classifying, recording and interpreting data.</p>	<p>Levels of Measurement</p> <p>Nominal</p> <p>Ordinal</p> <p>Interval</p> <p>Ratio</p> <p>Descriptive statistics</p> <p>Frequency distributions</p> <p>Central tendency</p> <p>Variability</p> <p>Levels of measurement</p> <p>Inferential statistics</p> <p>Sampling distributions</p> <p>Hypothesis testing</p> <p>Testing between group means</p> <p>Testing differences in proportions</p> <p>Testing between variables</p>	<p><b><u>Required Reading:</u></b></p> <p>Polit &amp; Beck,  Ch. 15 pps. 350-370; 375-377;  383-395</p> <p><b><u>Study Guide</u></b></p> <p>Complete Exercises Ch. 15 A,  B</p> <p><b><u>On-line Module</u></b></p> <p>Unit 10, Parts 1 and 2</p>

**NUR 4303 - NURSING RESEARCH**  
**UNIT XI - Evaluating Nursing Research Studies**

OBJECTIVES	CONTENT	LEARNING ACTIVITIES
1. Discuss the need for evaluating nursing research findings.	Evaluating research findings Strengths - weaknesses Applicability to Nursing Practice	<p><b><u>Required Reading:</u></b> Polit &amp; Beck, Ch. 17 &amp; 18</p> <p><b><u>Study Guide</u></b> Ch. 17 A,B Ch. 18 A,B</p>
2. Demonstrate decision-making and critical thinking skills in evaluating nursing research studies.		<p><b><u>On-line Module</u></b> Unit 11</p>
3. Analyze the role of the nurse as a research critic.	Nursing role Critical consumer	
4. List major elements of the critique process.	Evaluation Process Substantive and theoretical dimensions Interpretive dimensions Ethical dimensions Presentational and stylistic dimensions	
5. Utilizing guidelines in Polit and Beck. Critique a recent (3 yrs.) research study. See pp. 34 and 35 of this syllabus.		
6. Prepare a critique of a self-selected nursing research study for presentation to the class.		
7. Define utilization of nursing research.		
8. Discuss barriers to research utilization.		
9. Discuss the process and criteria for re-search utilization.		

**ARKANSAS TECH UNIVERSITY**  
**Department of Nursing**  
**NUR 4303 Nursing Research**

**OPTIONAL RESEARCH PROPOSAL GUIDELINES**

The proposal is developed by a group over the semester. Groups will consist of no more than four (4) students and a group grade will be given for the study.

The proposal is developed around an area of the students' interest in the clinical area of nursing.

The study will serve as a method of integrating and synthesizing material learned in the course. The students are not required to implement the study.

The proposal is to be typed in APA format and is not to exceed 10-12 pages. Two (2) copies of the paper are to be submitted with one (1) copy being retained in the Department of Nursing files. A copy of each reference should be submitted with the paper.

The paper will include:

Abstract

**Chapter One**

1. Introduction
2. Problem and Problem Statement
  - a. Significance to Nursing
  - b. Purpose of Study
  - c. Problem Statement
  - d. Definition of Variables

**Chapter Two**

1. Review of the Literature
2. Conceptual Framework
3. Hypotheses

**Chapter Three**

1. Research Design
2. Population and Sampling Plan
3. Measurement of Variables
  - a. Instrument
  - b. Procedure

The proposal will be due not later than \_\_\_\_\_

Students not meeting the date for submitting their proposals will receive an adjusted grade. Grades on late papers will be lowered one (1) letter grade for each consecutive day the paper is late.

**ARKANSAS TECH UNIVERSITY**  
**Department of Nursing**  
**NUR 4303**  
**Nursing Research**

**CRITERIA FOR OPTIONAL RESEARCH PROPOSAL**

STUDENT: \_\_\_\_\_

OTHER STUDENTS IN GROUP: \_\_\_\_\_

CRITERION	MAXIMUM SCORE	GROUP SCORE	INDIVIDUAL SCORE
I. Problem and Problem Statement	10	*	
II. Literature Review	10	*	
III. Theoretical Framework	10	*	
IV. Hypotheses	5	*	
V. Research Design	10	*	
VI. Population and Sampling Plan	5	*	
VII. Measurement of Variables	10	*	
VIII. Abstract	5	*	
IX. Organization, APA Format, Grammar, Spelling, etc.	10	*	
X. References	10	*	
XI. Peer Evaluation	15		**
	100 Points	Group Score _____	Individual Score _____

TOTAL SCORE \_\_\_\_\_

\* Group Score Only On These Criteria.

\*\* Individual Score Only On This Criterion.

EVALUATOR: \_\_\_\_\_

PROJECT: \_\_\_\_\_

**Confidential Peer Evaluation of Group Participation**

Date \_\_\_\_\_

Directions: Evaluate individual group members on each of the 10 points listed below on a scale of 1 to 10. Strive for some distribution of scores to reflect strengths and weaknesses of individuals.

- |                    |                    |
|--------------------|--------------------|
| 9 - 10 Outstanding | 3 - 4 Marginal     |
| 7 - 8 Excellent    | 1 - 2 Poor         |
| 5 - 6 Good         | N/A Not applicable |

The group member	Group Members names*	Group total					
1. was well prepared at all group meetings.....	1.						
2. accomplished group assignments on time....	2.						
3. actively participated in problem solving.....	3.						
4. seemed genuinely concerned with group goals, project(s).....	4.						
5. provided leadership to the remainder of the group.....	5.						
6. carried a fair share of the group's workload..	6.						
7. contributed ideas in organizing and implementing group project(s).....	7.						
8. actively participated in presenting project(s) to class and/or designated other (as appropriate).....	8.						
9. overall intellectual contribution to group.....	9.						
10. overall work contribution to group.....	10.						
<b>MEMBER TOTAL</b>							

\*Alphabetize by last name.

**ARKANSAS TECH UNIVERSITY  
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**POSTER PRESENTATION GUIDELINES**

A group develops the poster presentation over the semester. Groups will consist of no more than four students and a group grade will be given for the poster. The poster is developed around an area of the students' interest in the clinical area of nursing. The poster will serve as a method of integrating material learned in the course.

The poster should utilize APA format in citing references. Complete sentence or outline form may be used. A copy of the written content of the poster should be submitted along with the poster. A copy of each reference should be submitted with the paper.

The poster will include:

- Abstract
- Problem Statement/Question
- Significance to Nursing
- Purpose of the study
- Definition of Variables
- Methods
- Findings
- Implications for Nursing

The poster will be due no later than \_\_\_\_\_. Students not meeting the date for submitting their poster will receive 5 points off on grade for each day the poster is late.

## CRITERIA FOR POSTER PRESENTATION

Presenter (s) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Poster Title: \_\_\_\_\_  
\_\_\_\_\_

---

### A: OVERALL APPEARANCE (25%)

- |    |   |   |   |   |   |
|----|---|---|---|---|---|
| 1. | Does the display attract viewers' attention?                  | 1 | 2 | 3 | 4 |
| 2. | Is the display free of unnecessary detail?                    | 1 | 2 | 3 | 4 |
| 3. | Are the appropriate color combinations used?                  | 1 | 2 | 3 | 4 |
| 4. | Is there an appealing arrangement of script and graphics?     | 1 | 2 | 3 | 4 |
| 5. | Is there an appropriate use of white space to avoid crowding? | 1 | 2 | 3 | 4 |
| 6. | Is the primary script visible from 4 to 5 feet?               | 1 | 2 | 3 | 4 |
| 7. | Is the title succinct and complete?                           | 1 | 2 | 3 | 4 |

Subscore A: \_\_\_\_\_

### B: CONTENT (60%)

- |     |  |   |   |   |   |
|-----|--|---|---|---|---|
| 8.  | Does the abstract succinctly summarize poster contents?                                | 1 | 2 | 3 | 4 |
| 9.  | Is the author's name cited?  | 1 | 2 | 3 | 4 |
| 10. | Is the purpose stated?   | 1 | 2 | 3 | 4 |
| 11. | Is the method succinctly explained?  | 1 | 2 | 3 | 4 |
| 12. | Are the results highlighted in such a way so they make sense to the reader?            | 1 | 2 | 3 | 4 |
| 13. | Is the content logically organized?  | 1 | 2 | 3 | 4 |
| 14. | Are the references current?  | 1 | 2 | 3 | 4 |
| 15. | Is the display free of spelling and grammatical errors?                                | 1 | 2 | 3 | 4 |
| 16. | Are the implications for nursing described?  | 1 | 2 | 3 | 4 |
| 17. | Are the references in correct APA format?  | 1 | 2 | 3 | 4 |
| 18. | Are there an adequate number of references (peer reviewed journals) cited (5 or more)? | 1 | 2 | 3 | 4 |
| 19. | How well does the poster disseminate its information?                                  | 1 | 2 | 3 | 4 |

Subscore B: \_\_\_\_\_

Comments:

Grand Score (=A+B): \_\_\_\_\_

Group Participation Score(15%): \_\_\_\_\_

Final Grade: \_\_\_\_\_

**ARKANSAS TECH UNIVERSITY  
DEPARTMENT OF NURSING  
NUR 4303 NURSING RESEARCH**

**Articles On Poster Presentation**

\*Brooks-Brunn, J. (1996). Poster etiquette. Applied Nursing Research (2), 97-99.

\*Matera, R. M., & Gucciardo, J. P. (1992). Doing an effective poster presentation. RN, (May), 21-26.

\* These articles are on reserve at Ross Pendergraft library.

**ARKANSAS TECH UNIVERSITY  
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**RESEARCH ARTICLE CRITIQUE GUIDELINES**

Each student will select a *quantitative nursing* research article and will present a critique of the article to the class. Presentations are not to exceed five (5) minutes in duration.

The written critique will be submitted to the instructor on the date specified on the course calendar. The paper is to be typewritten and should not exceed 5-8 pages in length.

The grade for the critique will be based upon the quality of the presentation and the written paper. See Criteria for Evaluation of Research Critiques.

Students not meeting the date for submitting the written critique will receive an adjusted grade. Grades on late papers will be lowered one letter grade for each consecutive day the assignment is late.

The critique should be submitted in a plain, pocket folder (no binders), containing the critique, a copy of the article and the grading sheet (p. 35 of the syllabus).

**ARKANSAS TECH UNIVERSITY  
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**CRITERIA FOR EVALUATION OF RESEARCH CRITIQUE**

Student: \_\_\_\_\_

<b>CRITERION</b>	<b>MAX SCORE</b>	<b>INDIVIDUAL SCORE</b>
I. Critique of Problem Statement	10	
II. Critique of Literature Review	10	
III. Critique of Conceptual Framework	5	
IV. Critique of Hypothesis	5	
V. Critique of Research Design	10	
VI. Critique of Sampling Plan	10	
VII. Critique of Measurement	10	
VIII. Critique of Analysis	5	
IX. Critique of Ethical Dimensions	5	
X. Critique of Interpretive Dimensions	10	
XI. Verbal Presentation of Critique	10	
XII. Organization, APA Format, Grammar, Spelling, Etc.	10	
	100 pts.	Score _____