



**UNIVERSITY OF ALBERTA
COLLABORATIVE BACCALAUREATE
NURSING PROGRAM**

Grande Prairie Regional College
Grant MacEwan College
Keyano College
Red Deer College
University of Alberta

**NURSING 4970
Nursing Research and Statistics II
Course Outline, Fall 2002**

Dorothy Eiserman, RN, PhD

Office H202
Phone 539-2756
E-mail: deiserman@gprc.ab.ca

Dallas Sawtell, BA, BEd., BSc., MSc

Office: C204
Phone: 539-2989
Email: dsawtell@gprc.ab.ca

©UNIVERSITY OF ALBERTA COLLABORATIVE BScN PROGRAM, 2000

All rights reserved. No part of this document may be reproduced in any form or by any means without the publisher's written permission.

Approved (May, 2000)

NURSING RESEARCH & STATISTICS II

NURSING 4970*4 (2-5-1) 7 weeks.

Students will continue to develop their skills to critically read, analyze, and begin to use knowledge gained from research in their practice. Building on knowledge from N3970, this course focuses on understanding the implementation phase of research and inferential statistics. Students will also examine trends and issues in developing evidenced-based practice for the profession of nursing. (Pre-requisite: N3970)

***Note: In lieu of taking NS 3970/NS 4970, NS 3010 and a 3 credit UT statistics course may be used but credit cannot be granted to NS 3970/4970 if credit is obtained for NS 3010 and/or the statistics course.**

Course Hours: 28 hours of "structured" teaching/learning time (FRS's) and 6 hours of lab time in 7 weeks. Additional estimated time of 30 hours for independent study and group work will be required.

Course Description

This course builds on content from Nursing 3970. Students will continue to develop their skills to critically read, analyze and begin to use knowledge gained from research in their practice. The focus of this course is on understanding the implementation phase of research (data collection, data analysis, interpretation of findings). Students will also examine trends and issues in developing evidenced-based practice for the profession of nursing. Also included in this course are inferential statistics.

Course Objectives:

1. Discuss the types, advantages, and limitations of data collection methods used in both quantitative and qualitative nursing research methods.
2. Identify the criteria for determining the validity and reliability of measurement tools.
3. Discuss the criteria for determining confirmability of findings in a qualitative study.
4. Identify appropriate data collection methods for various qualitative and quantitative designs.
5. Differentiate data analysis methods for both quantitative and qualitative research.
6. Identify the purpose of and appropriateness of commonly used inferential statistics.
7. Distinguish between type I and type II errors and their effects on findings.
8. Differentiate between the meanings of statistical significance and clinical significance.
9. Apply critiquing criteria for an analysis of a published research report.
10. Develop and use a systematic approach for reading and critical appraisal of multiple published research reports on a selected topic.
11. Determine the applicability of knowledge gained from research for evidence-based practice.

12. Identify the role of a nurse in promoting research activities and using knowledge from research in the practice settings.
13. Discuss issues including barriers and facilitating factors influencing the advancement of nursing research and evidence-based practice.

Withdraw Deadline:

November 22, 2001

Texts

Lobiondo-Wood, G., & Haber, J. (2002). *Nursing research: Methods, critical appraisal, and utilization* (5th ed.). St. Louis: Mosby.

Polit, D.F. (1996). *Data analysis & statistics for nursing research*. Stamford, CT: Appleton & Lange.

N 4970 is integrated with N 490 learning packages.

Attendance at Fixed Resource Sessions:

The purpose of the FRS is to highlight primary concepts of the research process and to develop the student's ability to understand and critique published research through discussion of critiques. In the FRS, essential concepts related to nursing research and statistics will be discussed. Additionally, students will have the opportunity to discuss group critiques of selected articles to assist in understanding of the concepts.

Small Group Work:

The purpose of this activity is to provide students with an opportunity each week to critique selected aspects of a published research study using the critiquing criteria. Beginning in Week #2, a research report, selected by the instructor, will be reviewed. It is anticipated it will be relevant to the scenarios being covered. Students are expected to read each assigned research report and answer the critiquing questions included in the course outline **prior to attending the FRS**. For example, prior to the FRS on Research Designs, students will be expected to review the designs in the assigned articles.

Fixed Resource Session Schedule

STATISTICS	NURSING RESEARCH
#1 Chapter 5--Statistical Inference, pages 101 to end.	#1 Ethics in research
#2 Chapter 6--Testing the Difference Between two Means: The Two Sample <i>t</i> -Test	#2 Rigor in Quantitative Research Designs Sampling, and Data Collection Reliability and Validity of Instruments Levels of Measurements Applicability
#3 Chapter 7 & 11--Analysis of Variance, Covariance, Multivariate ANOVA (except Canonical Analysis).	#3 Rigor in Qualitative Research Design Data Collection, eg. Interviewer as Instrument Methods of data collection Trustworthiness
#4 Chapter 8--Chi-Square, page 193-202	#4 Critique of Results, Interpretation of Qualitative findings
#5 Chapter 9 & 10--Simple Regression & Multiple Regression Analysis	#5 Critique of Results, Interpretation of Quantitative findings
#6 Chapter 12--Factor Analysis	#6 Interpretation of Epidemiological studies.
#7 Final exam	#7 Issues in nursing research (funding, barriers, research utilization), Review Course Evaluation, Hand out Take Home Examination

YEAR IV (Labs 2 x 3 hours = 6.0 hr)

Nursing Research Lab: Qualitative Analysis (3.0)

1. Students will review a transcript of a tape recorded interview, provided by the instructor.
2. Students will perform a content analysis on data in the transcript provided and begin to thematically analyze the it.

Statistics Labs: Inferential Statistics (3.0)

Statistical concepts related to inferential statistics will be incorporated in the classroom setting at the end of each class.

EVALUATION:**1. Critique of a Research Report**

An article discussing a research study, from a referred source, will be provided by the instructor. All components of the report will be critiqued. For the critique, students will use the critiquing criteria included in your texts, readings, and fixed resource session. APA format and scholarly writing is expected.

Length of paper: 1000 – 1200 words.

Value: 40% Due: December 3, 2002 at 1430 hrs.

2. Weekly Statistics Assignments:

These assignments, in a worksheet format, will be completed in the Wednesday class. They will be marked and returned.

Value: 10% Due Weekly

3. Final Examination:

A two part final examination will be written. It will test Year III and IV concepts in research and statistics. The weighting will be: On each part 1/3 of questions will be from Year III and 2/3 of questions from Year IV.

Part I: Statistics

Value: 25% Date and Time TBA

Part II: Nursing Research

This will be a Take-Home Examination. It will be handed out on December 10, 2002.

Value: 25% Date Due: December 17, 2002 at 0800 hrs.

NOTE: The student must pass the statistics section of the course with a minimum mark of 50% or a grade of "3" will be given regardless of other assignment marks.
Assignment Policy

All assignments are to be passed in at the time and place they are due. Extensions on assignments may be granted and must be negotiated with the instructor prior to the due date and with a date specified for late submissions.

A penalty of 5% for each working day that an assignment is submitted after the due date will be deducted from the final mark. For example, a paper scored at 75% would receive an adjusted grade of 70% if handed in one day late. Late assignments are due by 1600h and must be verified (stamped with date and time) by nursing office personnel

**Marking Guideline
NS 4970
Research Critique**

Part A: Body of Paper

- 1.0 Introduction to article/significance to nursing (5)
- 2.0 Problem statement / phenomenon of interest (10)
- 3.0 Literature review
- 4.0 Purpose (5)
- 5.0 Research methods/design, including theoretical framework if applicable (10)
- 6.0 Ethical considerations (5)
- 7.0 Sample/participants (5)
- 8.0 Data collection (5)
- 9.0 Data analysis (10)
- 10.0 Findings (10)
- 11.0 Interpretation and discussion (10)
- 12.0 Additional considerations (5)

Part B: Writing Format/Style

- 1.0 APA format (5)
- 2.0 Development of ideas (5)
- 3.0 Introduction and conclusions (5)

TOTAL: /100 = /40%