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**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 2001**

Developed by:

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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.

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.

Instructors:

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Course Hours:

Nursing Research: Mondays 1300-1450 **B207**
Statistics: Mondays 1000-1120 **B302** and Wednesdays 1430-1550 **B206**

Withdraw Deadline:

November 23, 2001

Texts:

Lobiondo-Wood, G., & Haber, J. (1998). *Nursing research: Methods, critical appraisal, and utilization* (4th ed.). St. Louis: Mosby.

Norman, G. R., & Streiner, D. L. (1999). *PDQ Statistics* (2nd ed). Toronto: B. C. Decker Inc.

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. Each week a research report will be selected by the instructor. It is anticipated that the research reports students are to critique will be relevant to the scenarios being covered in the learning packages. 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 the data collection, students will be expected to review data collection methods and instruments in the assigned article.

Fixed Resource Session Schedule

STATISTICS	NURSING RESEARCH
#1 Introduction and review Concepts of correlation	#1 Review of NS 3970 content Ethics in research
#2 Sample/population/probability Confidence intervals	#2 Critique of sample, quantitative data collection Rigor in data collection, levels of measurement Reliability and validity of instruments
#3 Sampling distribution around mean Type I/II error	#3 Qualitative data collection Interviewer as instrument Methods of data collection Rigor in data collection
#4 Parametric tests – t-test, ANOVA	#4 Critique of results
#5 Non-parametric tests – Chi Square, Z scores	#5 Interpretation of findings and epidemiological studies
#6 Regression analysis	#6 Issues in nursing research (funding, barriers, research utilization)
#7 Final exam	#7 Final Exam

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

Nursing Research Lab: Qualitative Analysis (3.0)

1. Using a tape recording provided by the instructor, students will read a of a tape recorded interview between a researcher and participant.
2. Perform a content analysis on qualitative data provided by your instructor and begin to thematically analyze the data.

Statistics Labs: Inferential Statistics

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

EVALUATION:

1. **PAPER: Critique of a Research Report (40%) Due: December 3, 2001 during class.**

All components of the report will be critiqued. For the critique, students will use the critiquing criteria form, readings, and fixed resource session. APA format and scholarly writing is expected.

Length of paper: about 12 pages double-spaced.

2. **Weekly assignments (10%):** in the statistics portion of the course, weekly assignments will be marked and returned.

2. **FINAL EXAM: (50%) Date: December 10, 2001 at 1130 – 1430 in gym**

A final multiple choice, problems and short answer exam will be written at the end of YEAR IV which will test year three and four concepts in research and statistics. 1/3 of questions will be from Year III and 2/3 of questions from Year IV

Part I: Statistics (25%)

Part II: Nursing Research (25%)

*******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.**