Course Number and Title: GNUR 512: Quantitative Methods and Design for Nursing Research

Credits: 3 semester hours

Meeting Schedule: 9:00 – 5:00 pm
1/19 (LUHS), 2/16 (LSC), 3/16 (LUHS), 4/13 (LSC).

Pre-requisites: GNUR 450 or equivalent master’s level research course

Faculty: Sue Penckofer, PhD, RN
Professor and Loyola Faculty Scholar
Building 125, Room 4529

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Course Description:
This course focuses on quantitative research methods and designs for nursing research. The linkages between theory, concepts, research design, instrumentation, sampling, data collection and analysis, and reporting are emphasized. Ethical concerns related to the research process are discussed and analyzed. Strategies for developing a program of research and the leadership role of the researcher/scholar are addressed.

Course Outcomes:
Upon completion of this course, the student will:
1. Explain the historical significance of quantitative research in the development of nursing science.
2. Develop research questions to address gaps in knowledge.
3. Understand conceptual-operational linkages in quantitative nursing research.
4. Understand the elements of various quantitative research designs.
5. Synthesize knowledge from nursing practice, theory, and research in the formulation of quantitative nursing research studies.
6. Analyze ethical concerns of quantitative research.
7. Assess the adequacy of selected quantitative designs in answering research questions.
8. Evaluate quantitative research studies.

Teaching Methods:
This course is offered in a classroom setting using lecture, discussion, and seminar format. This course relies on the use of the Blackboard Course Management system at Loyola. If you have not used this format, please review the student orientation learning materials found in the Course Documents section (see tool bar on the left). Michael Paulin will be your contact for computer support. He can be reached at mpauli1@luc.edu or 708-216-3568.

You will find that you can email me as well as your fellow students. I will only email you through your luc.edu account. You are strongly encouraged to use your Loyola email account throughout your student experience. Should you choose to use your personal or work email accounts, you will need to re-route your email. The web site that can be used for this process is http://www.luc.edu/its/pam_reroute.shtml

**Course Evaluation:**

*Specific criteria regarding each assignment will be provided in blackboard.*

1. **Research Grids: 15%**  
The student will identify articles in their area of research and critique the studies using a research grid. To enhance the critique process, the selected articles will also be discussed in class each week. For example, during the week of descriptive designs, a research article using a descriptive design will be critiqued. The articles will be selected by the student and should be specific to their research area, but also employ different research designs (e.g., descriptive, comparative, experimental, quasi-experimental, epidemiologic such as cohort studies, etc...). The grids and the articles critiqued will be submitted.

2. **Classroom and Selected Homework Exercises: 30%**  
   Short paper comparing RCT to cohort study (15%)  
   Random Sampling and Power Analysis Exercise (15%)  

3. **Research Proposal and Presentation: 40%**  
   a. **Paper (35%)**: The student will write a comprehensive research proposal relative to their area of research. The paper will include: research aims (hypotheses if appropriate), supporting literature, design, sampling, procedures for data collection (including tool/instrument/questionnaire) and proposed statistical analyses. Justification for all aspects of the proposed research (e.g., justification for type of design keeping in mind the threats to internal and external validity, proposed power analysis for sample size, etc...), a section on the study risk(s), benefit(s), and limitations will also be included. Bonus points will be added for a realistic budget and timeline of the proposed research as well as completion of a biosketch.
   
   b. **Presentation (5%)**: The student will do a professional, powerpoint presentation of their research proposal followed by a seminar discussion. The student will provide a list of possible readings prior to the presentation to prepare fellow colleagues for seminar discussion.

4. **Research Exam: 15%**  
The student will complete an *in class exam* that addresses content from the class and readings.
**Required Course Materials:**


**Recommended Course Materials:**

**Suggested Research Textbooks:**

One of the following (should have one of these from a previous research course, older editions are fine, and current editions are now available online)


OR


**Suggested Writing Textbook.**

**Suggested Statistic Textbook.**

**Course Evaluation Expectation:**
It is a professional expectation that all students participate in course evaluations to guide ongoing program improvement. These are distributed two weeks before the end of the semester per University policy.

**Academic Integrity Statement:**
Papers will be submitted to “Turnitin” to scan for information published by others which could be considered plagiarism. Academic honesty is an expression of an ethic of interpersonal justice, responsibility, and care application to Loyola University faculty, students and staff that demands the pursuit of knowledge in the university community to be carried out with sincerity and integrity. Academic dishonesty is characterized by the failure to apply this ethic, i.e., any action
whereby faculty, student or staff misrepresents the ownership of academic work submitted in his or her name. Students failure to practice academic honesty will, depending on the seriousness of the misconduct, result in a sanction ranging from the grade of “F” for the assignments to expulsion from the University. The guidelines related to academic integrity are found at:

Sakai Site "Information for PhD Students" for the PhD Handbook. Also see graduate student website:

http://www.luc.edu/gradschool/academics_policies.shtml (Graduate School)

For policy on Incomplete grades, see above graduate student website

December 27, 2013 SP