## PhD Program Course Descriptions

### Fall Courses

**26:705:682 - Philosophy of Nursing Science and Knowledge Development (3)**
This course focuses on the historical and contemporary philosophical bases of nursing science through critically analyzing the viewpoints of natural science, integrative science, human science and ethics that underpin nursing knowledge, theory and research. Students will synthesize the philosophical positions of phenomena relevant to nursing research to further develop nursing knowledge.

**26:705:677 - Qualitative Research Methods (3)**
This course is concerned with the principles and modes of qualitative research design in which knowledge is generated for understanding human beings and the nature of their past and present transactions with themselves and their environment. Students will critically analyze the elements of systematic qualitative inquiry for gathering and interpreting data relevant to specified questions about human behaviors and its influence knowledge generation, theory development, research and the evolving discipline of nursing.

*Pre or Corequisite: 26:705:682*

**26:705:683 - Statistics for Nursing Research I (4)**
This course introduces the basics of statistics used in nursing/clinical research to summarize numeric data obtained from primary data collection, surveys, and experiments. The topics include frequency distribution, central tendency, variability, probability theory, and estimation. The student also learn how to test hypotheses for group differences in means (z test, t test, ANOVA, post-hocs) and for association between two variables (correlation, crosstabs, chi-square test). Students will also learn non-parametric tests for group mean differences. A weekly laboratory session is included, to give students hand on experience with various types of software used in data analysis.

*Prerequisite: Basic Statistics*

**26:705:686 - Advanced Quantitative Analytical Methods for Nursing Research (4)**
This is a course in advanced quantitative analytical methods. Students taking the course have already had introductory course work in research methods, measurement theory, basic statistics and probability, and the linear model as applied through multiple regressions. The readings and class time focus on three topics: advances in ordinary least squares (OLS) regression including mediation models, moderation models, and conditional process analysis; multilevel modeling (also known as hierarchical linear model) including longitudinal studies; and, path analysis. Topics are enhanced by lab work using statistical packages including IBM-SPSS, R Statistics, and HLM.

**26:705:684 - Advanced Qualitative Research (3)**
This course provides critical analysis of the many types of qualitative research methods, emphasizing methodological assumptions and approaches for the purpose of application to research questions. Students will focus on the practical aspects of design, entrée, ethics, data-gathering techniques (interviewing, observing), data recording, data management and data analysis. During this course, students will conduct a small pilot study related to their phenomenon of interest and critique their data collection and data analysis processes.

*Prerequisites: 26:705:677, 682*

**26:705:688 - Practicum in the Professoriate Role (3)**
This course is required of PhD students preparing for the professorial role. The course focuses on university teaching and the products of scholarship expected of faculty who intend a career in a research-oriented university. The course is individualized to the needs of each student.

**26:705:703 - Dissertation Research (15-18)**
Students develop and complete dissertation research under the supervision of a designated member of the nursing graduate faculty.

*Prerequisite: 26:705:701*
### Spring Courses

**26:705:678 - Theory and Application to Nursing Research (3)**  
This course focuses on the relationship of theory to nursing research with an emphasis on explanatory and predictive theory development, analysis, evaluation and testing. Students are guided to consider how the nature of the research problem and theory guides the choice of research method. Emphasis is also placed on the identification, review, analysis, and integration of key theory concepts and relationships in the student's own planned research.  
**Pre or Corequisite:** 26:705:682

**26:705:681 - Quantitative Methods for Nursing Research (3)**  
This course covers the definition, utilization, and critique of the rigor for non-experimental and experimental quantitative research designs, study development, and analysis of quantitative data for research in nursing and patient care. Students link theory with operational techniques in the design, methodology, and measurement of their phenomena of interest. The course provides strategies and application for power analysis, sampling, measurement, the logic of causal inference. The course will introduce students to some additional multivariate methods, such as reliability analysis, correlation, latent class analysis including factor analysis and structural equation modeling with applications to substantive research questions.

**26:705:685 - Statistics for Nursing Research II (4)**  
This course builds upon the basics of statistics used in nursing/clinical research taught in Statistics for Nursing Research I. Topics include Multiple Regression (Simultaneous and Stepwise/Hierarchical), Curve Estimation/Transformations, Logistic Regression (Binary and multinomial). Additional topics include Structural Equation Modelling/ Path Analysis (Continuous and dichotomous Variables). A weekly laboratory session is included, to give students hand on experience with the various types of software used in data analysis.  
**Prerequisite:** 26:705:683

**26:705:689 - Research Practicum (3)**  
The purpose of this experience is to allow the student to participate in phases of the research process under the tutelage of an experienced mentor. This experience precedes the student's independent dissertation research. The student works closely with a mentor who is a doctorally-prepared faculty member (or non-faculty researcher with comparable credentials--e.g. NIH Intramural Researcher) who is conducting a program of research related substantively and/or methodologically to the student’s anticipated dissertation topic. The student may work with his/her advisor or another faculty member in the College of Nursing; or the student may carry out the research experience in another setting in which state-of-the-science research is being conducted. In this experience, the student is expected to participate actively as a member of the research team and to produce a tangible scholarly product. Specific activities and products are planned under the guidance of the advisor in collaboration with the mentor, and depend on the nature and stage of the research project.  
**Prerequisites:** 26:705:677, 683, 685

**26:705:701 - Dissertation Seminar (3) (combines former Dissertation Seminars I and II)**  
This seminar provides students with an opportunity for dialogue with peers regarding their progress on the dissertation proposal. The focus of the course is student presentations of their dissertation plan and work in-progress with group feedback to strengthen the dissertation proposal.  
**Prerequisites:** 45:705:607 or 26:705:570, and 676, 677, 678, 679, 681, 682, 683, 685, 687, 689, and 684 or 686

**26:705:703 - Dissertation Research (15-18)**  
Students develop and complete dissertation research under the supervision of a designated member of the nursing graduate faculty.  
**Prerequisite:** 26:705:701
## Summer Courses

### 26:705:676 - Measurement of Health Care Phenomena (3)
This course will provide an overview of the links between theory and measurement, data collection methods, and critical issues in measurement. A combination of theory, methods and skill development will be incorporated into the course. Teaching-learning methods include lecture, discussion, computer lab data assessment using SPSS, and selected homework assignments. The assigned select readings will be used as the focus for class discussion. The critical evaluation of the concepts underlying measurement reliability and validity and the construction of measurement tools and their use in quantitative research are explored.

**Prerequisite:** 26:705:628, 633, 658

### 26:705:679 - Evidence-Based Policy Development (3)
This course focuses on the leverage of nursing research in the development of evidence-based health policy in the private and public policy arenas. Theoretical bases and strategies for evidence-based health policy development will be analyzed. Leadership skills in the areas of influencing evidence-based policy, garnering grass roots support, and developing a policy message for the media and policy-makers will be developed. Examples of translation of NIH-funded research into health policy decisions at the professional, organizational, state, federal, and international levels will be critiqued, and students will analyze the implications of their proposed research on policy development.

### 26:705:687 - Role of the Nurse Scholar (3)
This seminar addresses the responsibilities and activities of a scientist in the health professions including ethical issues; scientific freedom and social responsibility; mentoring; interdisciplinary research and team science; conduct of culturally competent scholarship; peer review; building a systematic program of research; research funding and grantsmanship; scholarly writing, presentations and publications

**Prerequisite:** 26:705:682, 677, 678, 679, 681