

Nursing Science (NUS)

NUS 710 - INDEPENDENT STUDY

Semester Hours: 1-6

This course is for Joint PhD Nursing Science program students who are interested in an independent study option to identify additional literature synthesis, planning, implementation, and evaluation of related phenomena of special interest to advance nursing science.

NUS 713 - SPECIAL TOPICS

Semester Hours: 3

This course is for Joint PhD Nursing Science program students who are seeking opportunities to explore special topics that expand their knowledge and/or skills to conduct sponsored research projects. The focus of this three-credit hour didactic course will be developed in collaboration between the faculty and student(s).

NUS 741 - BSN-PHD RESEARCH SEMINAR I

Semester Hour: 1

The purpose of this course is to prepare BSN-PHD students with the foundational skills of deep reading, comprehensive literature review and critique, critical thinking, and writing skills necessary for successful advancement in a doctoral program. This course will further help students by providing more individualized support and structure to facilitate successful progression through the PhD program.

NUS 742 - BSN-PHD RESEARCH SEMINAR II

Semester Hour: 1

The purpose of this course is to aid BSN-PhD students in developing skills to assess scientific rigor, develop an argument, critique published research, professionally present (verbally and written) critique findings, develop a manuscript for publication, and will provide an opportunity to obtain hands on research experience. This course will further help students by providing more individualized support and structure to facilitate successful progression through the PhD program.

NUS 743 - BSN-PHD RESEARCH SEMINAR III

Semester Hour: 1

The purpose of this course is to prepare BSN-PhD students with the foundational skills of systematically appraising the literature to develop an appropriate and comprehensive significance section, analyzing health policy that directly relates to the students' research areas of interest, and evaluating research methodology and accompanying statistical analyses. These are important for successful advancement in a doctoral program. This course will further help students by providing more individualized support and structure to facilitate successful progression through the PhD program.

NUS 750 - PHILOSOPHY OF SCIENCE

Semester Hours: 3

The purpose of this course is to explore the evolution of philosophy and science. Epistemology, knowledge generation, knowledge acquisition, and ways of knowing will be examined. Scientific inquiry will include reasoning, logic, and persuasive argument development.

NUS 752 - INFORMATICS FOR HEALTH CARE TERMS AND SCHOLARLY INQUIRY

Semester Hours: 3

The purpose of this course is to prepare nurse scientists to use informatics, electronic tools, and healthcare technologies for the purposes of nursing research. The course will focus on the use of informatics in the data management of individuals, groups and organizations as the nurse scientist plans and executes a program of research.

NUS 754 - ETHICAL AND LEGAL ISSUES IN RESEARCH

Semester Hours: 3

The purpose of this course is to introduce the student to doctoral scholarship in support of beginning a program of responsible conduct of research. This course explores current ethical and legal issues in the science of nursing research. The course will delve into best practices in research design with regard to ethics, authorship, data management and record keeping, intellectual property and ownership of data, and human subjects research. In addition, the course will cover conflicts of interest, mentoring, collaborations, peer review, research misconduct, and current ethical issues in research.

NUS 756 - APPLICATION OF THEORETICAL MODELS

Semester Hours: 3

The purpose of this course is to provide students a foundation for contributing to theory development processes, analyzing and critiquing theoretical foundations of research, and applying theoretical models to nursing research. This course addresses the relationship between theory and research and provides an understanding of the use of theoretical models and conceptual foundations to guide nursing research and practice. Prerequisites: NUS 750.

NUS 758 - QUANTITATIVE RESEARCH METHODS

Semester Hours: 3

This course provides students with foundational knowledge and skills in the development of experimental and nonexperimental quantitative designs. Topics will include training in the choice of research questions/aims/hypotheses and a responsive approach; the development of an ethical, strategic design; the implementation of a strategic sampling plan; the choice of suitable measurements (reliable and valid) and analytic plans; issues in research such as treatment fidelity; and the drafting of research proposals. Additional content will briefly introduce more advanced concepts such as mixed methods research or community-based participatory research. Special emphasis will be placed on clinical nursing designs, such as repeated-measures intervention studies. Prerequisites: NUS 750.

NUS 760 - STATISTICS I

Semester Hours: 3

The purpose of this course is to provide the student with the skills to conduct and interpret statistical data. Emphasis will be placed on describing types of variables, testing hypotheses, selecting appropriate parametric and nonparametric statistical tests, analyzing data, and interpreting results. Prerequisite: NUS 758.

NUS 762 - HEALTH CARE POLICY FOR RURAL AND MEDICALLY UNDERSERVED POPULATIONS

Semester Hours: 3

The purpose of this course is to explore the policy environment that influences and shapes public health and health care service delivery, including rural and medically underserved communities. Students will develop skills, techniques, and approaches to identify gaps, critically analyze and research health related issues. Utilization and delivery of data to promote and impact healthcare policy changes will be an important measure of outcome. Students will develop the ability and confidence to critically assess current health policy issues in a thoughtful, comprehensive and rigorous manner and to engage in the policy process.

NUS 764 - SCIENTIFIC WRITING

Semester Hours: 3

The purpose of this course is to develop writing skills to produce scientific writing that is clear, concise, and logical. This course will also explore the publication to include abstract and manuscript development and the submission process. Additional pathways to dissemination of nursing content will be explored as well.

NUS 766 - EPIDEMIOLOGY IN RURAL AND MEDICALLY UNDERSERVED POPULATIONS

Semester Hours: 3

The purpose of this course is to introduce epidemiological methods for measuring population health, designing and implementing observational and experimental studies, critically reading the public health literature, and applying research findings to global and community health. Prerequisite: NUS 760.

NUS 768 - STATISTICS II

Semester Hours: 3

This course provides advanced coursework in applied statistical approaches to data management and analysis. With an emphasis on multivariate statistical approaches, the purpose of the course is to help nursing students to develop improved skills in conceptualizing, executing, analyzing, and interpreting advanced analytic strategies and to enhance their ability to propose strong, tailored analytic approaches for specific study designs and research aims. Students will also gain proficiency in using R software, a freely available and powerful statistical package. They will enhance their knowledge of regression, OLANOCOVE, MANOVA/MANCOVA, discriminant analysis, exploratory and confirmatory factor analysis, structural equation modeling, multilevel modeling, and advanced categorical approaches. Understanding the mathematics, logic, application of these techniques is emphasized. Prerequisite: NUS 760.

NUS 770 - GRANT WRITING

Semester Hours: 3

The purpose of this course is to prepare students in the foundations of writing grants for federal external funding. This course will help students identify a step-wise process to develop a grant proposal through federal funding sources. Strategies for successful grant writing include identifying funding sources for the topic, writing a competitive grant application, developing a collaborative team of researchers for the project, and understanding the review process. Prerequisite: NUS 764.

NUS 772 - QUALITATIVE RESEARCH METHODS

Semester Hours: 3

The purpose of this course is to assist the student in using selected qualitative research methods. Learning modules will explore qualitative approaches, sampling, data collection, data analysis and dissemination. The course will review and explore the use of technology to assist the qualitative researcher. Prerequisites: NUS 750, NUS 756, and NUS 758.

NUS 776 - ADVANCED RESEARCH METHODS

Semester Hours: 3

The purpose of this course is to assist students in developing the knowledge and skills to design a mixed methods research (MMR) study. MMR is an advanced method for collecting, analyzing, and "mixing" both quantitative and qualitative data within a single study to understand a research problem more completely. Prerequisites: NUS 752, NUS 758, NUS 760, NUS 768, and NUS 772.

NUS 780 - INTRODUCTION TO OMICS

Semester Hours: 3

The purpose of this course is to introduce the revolution of omics and discuss the role nurse scientists can play in precision health development. Nurse scientists are in a position to provide a unique contribution to person-centered health approaches by broadening their understanding of molecular advances to improve health outcomes. A variety of different omics will be explored and the practical advantages, limitations, and challenges in individualized health promotion will be discussed.

NUS 781 - OMICS IN NURSING RESEARCH

Semester Hours: 3

The purpose of this course is to provide an overview of advanced concepts of omics research by utilizing a biobehavioral systems approach in nursing science. The National Institute of Nursing Research's strategic plan for Genomic Nursing Science is used as the framework for integrating omics and nursing research. Practical application in omics theories, methodologies, technology, bioinformatics, and responsible conduct of research is discussed. Additionally, resources in building capacity for the next generation of omics scientists are reviewed. Prerequisite: NUS 780.

NUS 782 - CURRICULUM DEVELOPMENT AND PROGRAM EVALUATION FOR NURSE EDUCATORS

Semester Hours: 3

The purpose of this course is to examine the procedures for designing, implementing, and evaluating nursing education curriculum. The process will be examined beginning with the program mission. Educational theories, philosophy, concepts, and program evaluation will be explored. The nurse educator's role in curriculum design and program evaluation is assessed.

NUS 783 - INSTRUCTIONAL METHODS AND ASSESSMENT IN NURSING EDUCATION

Semester Hours: 3

The purpose of this course is to discover teaching styles and implement instructional technologies to promote learning in diverse populations of students. Throughout the semester, students will explore didactic and clinical learning activities and evaluation strategies to demonstrate transfer of learning. Prerequisite: NUS 782.

NUS 784 - DATA SCIENCE AND EMERGING TECHNOLOGIES

Semester Hours: 3

The purpose of this course is to apply concepts associated with data analytic methods and the use of burgeoning technologies in healthcare. The course prepares the nurse scientist to engage with other researchers in the areas of data analytics, simulation, telehealth, and robotics. The appropriate integration of health care technologies to support nursing research will be emphasized.

NUS 785 - RESEARCH AND DEVELOPMENT (R&D) OF INNOVATIVE HEALTH CARE TECHNOLOGY

Semester Hours: 3

The purpose of this course is to develop the scientific skills to move an innovation from concept to implementation following a research and development (R&D) process. The course prepares the nurse scientist to engage with researchers inside and outside Prerequisite: NUS 784 or permission of professor.

NUS 798 - COMPETENCY ASSESSMENT

Semester Hours: 0

All students enrolled in the Joint Nursing Science PhD program are required to register for this course at the beginning of the semester during which they take the comprehensive examination. A grade will be determined entirely by an assessment of the student's performance on the comprehensive examination, and the grade will be either satisfactory/unsatisfactory. The course may be repeated once and must be passed if the student is to progress to dissertation. Prerequisite: NUS 776.

NUS 799 - DOCTORAL DISSERTATION

Semester Hours: 9

This independent research course partially fulfills required doctoral level research dissertation hours toward the PhD in the student's field. A minimum of 24 dissertation hours are required, at 1-12 hours per semester. The course is conducted under the guidance of the PhD chair. After completing requirements for admission to candidacy, the student registers for a minimum of 3 hours per semester in this course, each semester, until all dissertation requirements have been approved. Material covered will be of an advanced nature aimed at providing doctoral students with an understanding of the latest research and current developments within the field. Discussion and advisor guidance will be focused on readings of research articles and development of research methodology with the aim of producing an original research contribution that represents a novel development in the field, or a novel perspective on a pre-existing topic in the field. Prerequisite: NUS 776.