Nursing Science

The Department of Nursing Science is a collaboration between Goldfarb School of Nursing at Barnes-Jewish College and the School of Medicine at Washington University. The Goldfarb School of Nursing emphasizes the reciprocation among research, clinical practice, and teaching based on the belief that clinical practice advises research, research advises clinical practice, and both research and clinical practice advise teaching. The school's commitment to the preparation of the next generation of nurse scientists is reflected in the strong research emphasis of the PhD program in the science of nursing.

The goal of the PhD program is to educate nurse scientists whose career goals include conducting nursing research. Students bring a unique combination of nursing knowledge and clinical experiences to doctoral study, and these serve as the basis for the development of programs of study that are both compatible with the core doctoral curriculum and individualized to allow for the gaining of in-depth knowledge in a specialized area of study. The PhD in Nursing Science provides a solid foundation for graduates to pursue rigorous programs of nursing research that are clinically significant and contribute to the advancement of nursing science.

Contact: Judith Frain
Phone: 314-362-3316
Email: jfrain@wustl.edu
Website: https://www.barnesjewishcollege.edu/doctoral-degree/phd-nursing-science/

Degrees & Offerings

- PhD in Nursing Science (http://bulletin.wustl.edu/medicine/degrees-offerings/nursing-science-phd/)

Research

Deborah Birk, PhD, RN, MHA, NEA-BC, is the Director of the Health Systems and Population Health Leadership concentration in the Doctor of Nursing Practice program and Assistant Professor at Goldfarb School of Nursing. Dr. Birk's program of research involves executive nursing leadership and quality of nurse leaders in health systems.

Research interests: Executive nursing leadership, health systems, population health, health policy, women's health, nursing curriculum, evidence-based practice, quality improvement in health care, and emotional intelligence and resilience in health-care leaders

Maryann Bozzette, PhD, RN, CLC, is an Associate Professor at Goldfarb School of Nursing. Dr. Bozzette's program of research is focused on the perceptual and social development of premature infants, developmentally supportive care, and parent-infant interaction.

Research interests: Sensory interventions for premature infants, biomedical measures, observational research, attachment, breastfeeding high-risk infants, and early communication behaviors of premature infants

Mary Curtis, PhD, DNP, RN, is the Director of the Adult Gerontology Primary Care Nurse Practitioner concentration in the Master of Science in Nursing program and a Professor at Goldfarb School of Nursing. Dr. Curtis is a certified adult and family care nurse practitioner whose clinical practice focuses on adult primary care with an emphasis on end-of-life, palliative, and hospice care.

Research interests: Injury prevention interventions, quality, safety, end-of-life care, health promotion, and action research/scholarship of teaching and learning

Sarah Farabi, PhD, RN, is an Assistant Professor at Goldfarb School of Nursing. Dr. Farabi's program of research is focused on understanding the biobehavioral mechanisms underlying obesity. She has a particular interest in the influence of diet and sleep on metabolic disturbances.

Research interests: Obesity, diet, sleep, diabetes, nurse-led interventions, and pregnancy

Judy Frain, PhD, RN, is the Director of the PhD in Nursing Science program and an Associate Professor at Goldfarb School of Nursing. Dr. Frain's program of research is focused on improving quality of life in older adults, with an emphasis on those living with HIV.

Research interests: Symptom science, self-management of chronic disease, quality of life, and examining the intersection of aging and chronic disease

Heidi Holtz, PhD, RN, is an Assistant Professor at Goldfarb School of Nursing. Dr. Holtz was a research fellow at Johns Hopkins Berman Institute of Bioethics. Dr. Holtz's program of research focuses on nursing students' experiences and the consequences of faculty incivility, with a special interest in researching the construct of moral resilience and applying that research to develop innovative approaches to foster moral resilience in health-care environments.

Research interests: Civility in nursing, moral resilience among health-care professionals, and burnout among health-care professionals

James R. Kennett, PhD, RN, is an Assistant Professor at Goldfarb School of Nursing. Dr. Kennett's program of research is focused on living with chronic illness and improving health-care outcomes.

Research interests: Theory development, chronic illness, the patient/provider relationship, collaborative research, engineering principles used in health care, communication patterning, behavior patterning, and the application of intermodernism

Pamela Newland, PhD, RN, CMSRN, is an Associate Professor at Goldfarb School of Nursing. Dr. Newland is a nurse scientist with expertise in symptom science and self-management in persons with disabilities and chronic conditions.

Washington University in St.Louis

Research interests: Designing self-management interventions, validating patient-reported outcome measures, shared decision making, examining biobehavioral and quality improvement, promoting health and well-being, mobile health technology, and mixed methods

MaryAnn Niemeyer, PhD, MSN, RN-BC, is an Assistant Professor at Goldfarb School of Nursing. Dr. Niemeyer's program of research investigates the improvement of safety and quality of nursing practice and health care. She is also interested in simulation research for the improvement of nursing practice, especially regarding practice and decision making.

Research interests: Health-care simulation research, failure-to-rescue research, nursing care handoffs, medical errors, clinical outcomes, and principles and techniques to promote patient health, communication, safety, comfort, and care quality

Amy Piontek, PhD, RN, CHES, is an Assistant Professor at Goldfarb School of Nursing. Dr. Piontek's program of research is on the improvement of patient and caregiver self-efficacy in managing end-of-life symptoms through education and early referral to palliative and hospice programs.

Research interests: Creating effective virtual and simulation learning environments for nursing students, exploring technology to improve student engagement, and designing outreach platforms for health educators to educate the general population about end-of-life and palliative care options

Dominic Reeds, MD, is the Associate Dean for Research at Goldfarb School of Nursing and the Associate Director of Washington University's Nutrition and Obesity Research Center and Center for Diabetes Translation Research. He is a Professor in the Geriatrics and Nutritional Science Division at Washington University School of Medicine, and he is Director of the Barnes-Jewish Hospital Nutrition Support Service. Dr. Reeds is Director of Washington University's KL2 program and Co-Director of the Master of Science in Clinical Investigation. His research focuses on the pathogenesis of HIV-associated diabetes and obesity.

Research interests: Clinical nutrition; diabetes and metabolism; prevention, pathogenesis, and management of cardiometabolic risk factors, including obesity, hypertension, and HIV; and nurse-led implementation science programs for the management of hypertension and diabetes

Nancy Ridenour, PhD, APRN, FAAN, is the President of Goldfarb School of Nursing. Dr. Ridenour's program of research is focused on increasing health equity using health policy, population health and primary care.

Research interests: Advanced practice nursing, access and quality in primary care, underserved populations, global health, and health policy

Judy Smith, PhD, RN, GCNS-BC, is the Assistant Dean of the Bachelor of Science in Nursing Program at Goldfarb School of Nursing. Dr. Smith's program of applied research addresses adults who are impacted by aging and its accompanying losses utilizing a biopsychosocial approach.

Research interests: Loneliness, dementia, and delirium and how these common geriatric syndromes impact the holistic health of older adults

Po-Yin Yen, PhD, RN, is an Associate Professor at Goldfarb School of Nursing and an Associate Professor of Medicine in the Division of General Medical Sciences at Washington University School of Medicine. Dr. Yen's program of research is focused on applied clinical informatics research to promote a user-friendly health information technology environment for clinicians and patients.

Research interests: Clinical informatics, usability, technology acceptance, human-computer interaction, user-centered design, mixed methods, literature mining, data visualization, workflow analysis, and time and motion study

Faculty

Program Chair

Judy Frain (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=39)
Director, PhD in Nursing Science Program
Associate Professor
PhD, University of Missouri–St. Louis

Associate Dean for Research

Dominic Reeds (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=223)
Associate Dean for Research, Goldfarb School of Nursing
Associate Director, Washington University's Nutrition
  and Obesity Research Center
  and Center for Diabetes Translation Research
Professor, Geriatrics and Nutritional Science Division,
  Washington University School of Medicine
Director, Barnes-Jewish Hospital Nutrition Support Service
MD, Texas Tech University Health Sciences Center

Faculty

Deborah Birk (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=151)
Assistant Professor
Director, Health Systems & Population Health
  Leadership concentration, Doctor of Nursing Practice program
PhD, University of Missouri

Maryann Bozzette (https://www.barnesjewishcollege.edu/ Employee-Search-Directory/?id=206)

Associate Professor

PhD, University of Washington–Seattle

Mary Curtis (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=22)

Professor

Director, Adult Gerontology Primary Care Nurse Practitioner
   concentration, Doctor of Nursing Practice program

PhD, Saint Louis University

Sarah Farabi (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=186)

Assistant Professor

PhD, University of Illinois–Chicago

Heidi Holtz (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=231)

Assistant Professor

PhD, Indiana University–Purdue University Indianapolis

James Kennett (https://www.barnesjewishcollege.edu/ Employee-Search-Directory/?id=181)

Assistant Professor

PhD, University of San Diego

Pamela Newland (https://www.barnesjewishcollege.edu/ Employee-Search-Directory/?id=78)

Associate Professor

PhD, University of Missouri–Columbia

MaryAnn Niemeyer (https://www.barnesjewishcollege.edu/ Employee-Search-Directory/?id=215)

Assistant Professor

PhD, University of Missouri–Columbia

Tamara Otey (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=140)

Assistant Professor

PhD, Indiana University

Amy Piontek (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=214)

Assistant Professor

PhD, Southern Illinois University–Carbondale

Nancy Ridenour

President and Professor, Goldfarb School of Nursing

PhD, Texas Tech University

Mayola Rowser (https://www.barnesjewishcollege.edu/ Employee-Search-Directory/?id=203)

Dean and Professor, Goldfarb School of Nursing

PhD, University of Tennessee Health Science Center

Judy Smith (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=100)

Assistant Dean and Professor, Undergraduate Nursing Program

PhD, Saint Louis University

Po-Yin Yen (https://www.barnesjewishcollege.edu/Employee-Search-Directory/?id=166)

Associate Professor, Goldfarb School of Nursing

Associate Professor, Institute of Informatics,
   Washington University School of Medicine

PhD, Columbia University

Courses

Visit online course listings to view semester offerings for M93 NrsSci (https://courses.wustl.edu/CourseInfo.aspx? sch=M&dept=M93&crslvl=1:5).

M93 NrsSci 510 Sympton Science and Precision Health Care: Omics and Big Data
This course focuses on symptom science as a major branch of nursing research as it relates to precision healthcare. Precision healthcare considers individual variability in genes, environment and lifestyles. An introduction to the omic sciences, big data science, and their relationships is also provided.
Credit 3 units.

M93 NrsSci 511 Philosophy and Theoretical Underpinnings of Nursing Science
This course explores the evolution, assumptions, and principal themes that underpin philosophies of nursing science and their influence on knowledge development for nursing practice and nursing theory. The interrelationships among theoretical perspectives, theoretical thinking, scientific inquiry, and knowledge development in nursing will be discussed. The relationship of scientific integrity and bioethics to the scientific method will be discussed.
Credit 3 units.

M93 NrsSci 512 Literary Critique and Synthesis
The focus of this course is on synthesizing evidence from the published research literature to determine the state of knowledge about a selected research topic and to guide a research plan. The course emphasizes the processes of critiquing, analysis, and synthesis of existing research in order to draw useful conclusions or make decisions about the topic, problem, or research plan. Prerequisite: L88 510.
Credit 3 units.

M93 NrsSci 513 dissemination and Implementation Science
This course focuses on dissemination and implementation research. Strategies underlying the creation, transmission, and reception of information will be explored. The goal of this course is to bridge the gap among clinical research, everyday practice, and public health by building a knowledge base to improve population health. Prerequisite: L88 512.
Credit 3 units.

M93 NrsSci 514 Grant Writing and Scientific Review
This course focuses on developing and evaluating fundable research applications. Grant-writing and scientific review processes are emphasized, including identifying various types of funding mechanisms, developing successful grant applications, and reviewing research proposals. Strategies for developing high impact scientific protocols and a feasible research budget will be discussed. Opportunities to conduct peer reviews of grant applications will be provided. Prerequisite: L88 513.
Credit 3 units.

Washington University in St.Louis

M93 NrsSci 515 Interdisciplinary Science and The Innovative Nurse Scientist

This course provides an educational opportunity to understand diverse disciplines with their specific perspective in conducting research. The emphasis is placed on understanding key scientific concepts and methodologies. The goal is to connect and integrate different schools of thought and demonstrate how the disciplines of science come together in innovative ways to identify and solve scientific challenges. Preparation, training, support, challenges, and roles of the nurse scientist are also explored. Related topics include how to advance a career as a nurse scientist with a focus on building a research trajectory, obtaining funding and becoming an innovative researcher who is able to identify trends in emerging science. Discussions will focus on integrating biologic and behavioral factors to achieve translational bench-to-bedside nursing science. Prerequisites: L88 513 and L88 534. Credit 3 units.

M93 NrsSci 520 Research I: Research Designs and Measurement for Scientific Inquiry: Quantitative Methods

The goal of this course is to deepen the understanding of scientific inquiry pertaining to quantitative methods in nursing research. This course emphasizes research questions/hypotheses, frameworks, designs, methodology, and analysis. Methods of dissemination of research findings in symptom science are examined.
Credit 3 units.

M93 NrsSci 521 Research II: Research Design and Measurement for Scientific Inquiry: Qualitative Methods

This is an introductory course in qualitative research with particular focus on the health sciences. The course focuses on study of traditions and methods, scientific issues, techniques of data collection, analysis and interpretation. Emphasis is given to the contribution of qualitative research in expanding nursing knowledge
Credit 3 units.

M93 NrsSci 522 Research III: Research Designs and Measurement for Scientific Inquiry: Psychometrics

This course offers information on psychometric theories. The application of these theories in constructing and evaluating measurements in nursing research is presented. Relevant course content includes statistical techniques to evaluate measurements, such as reliability and validity tests. This course also provides an introduction to the issues that arise when writing/selecting questions for the psychosocial instruments. The focus is on examining the logic of measurement in standardized survey administration and selected techniques for testing scale items. Prerequisite: L88 520.
Credit 3 units.

M93 NrsSci 530 Mentored Research Experience I

This course is the first in a five serial mentored research course series designed to provide one-to-one mentoring for students to have hands-on research experiences and gain skills necessary to conduct interdisciplinary research. Students will be paired with a nursing mentor and a non-nursing mentor. In courses I and II, students will learn about a chosen research project led by the non-nursing mentor and work with his/her research team. In courses III and IV, under the supervision of both nursing and non-nursing mentors, students will identify a scientific challenge that is significant to nursing. Students will then develop a research plan integrating methods from a non-nursing discipline to address the challenges. In course V, students will work closely with the nursing and non-nursing mentors in developing their dissertation research proposal.
Credit 1 unit.

M93 NrsSci 531 Mentored Research Experience II

This course is the second in a five serial mentored research course series designed to provide one-to-one mentoring for students to have hands-on research experiences and gain skills necessary to conduct interdisciplinary research. Students will be paired with a nursing mentor and a non-nursing mentor. In courses I and II, students will learn about a chosen research project led by the non-nursing mentor and work with his/her research team. In courses III and IV, under the supervision of both nursing and non-nursing mentors, students will identify a scientific challenge that is significant to nursing. Students will then develop a research plan integrating methods from a non-nursing discipline to address the challenges. In course V, students will work closely with the nursing and non-nursing mentors in developing their dissertation research proposal. PREREQUISITE: L88 530
Credit 1 unit.

M93 NrsSci 532 Mentored Research Experience III

This course is the third in a five serial mentored research course series designed to provide one-to-one mentoring for students to have hands-on research experiences and gain skills necessary to conduct interdisciplinary research. Students will be paired with a nursing mentor and a non-nursing mentor. In courses I and II, students will learn about a chosen research project led by the non-nursing mentor and work with his/her research team. In courses III and IV, under the supervision of both nursing and non-nursing mentors, students will identify a scientific challenge that is significant to nursing. Students will then develop a research plan integrating methods from a non-nursing discipline to address the challenges. In course V, students will work closely with the nursing and non-nursing mentors in developing their dissertation research proposal. PREREQUISITE: L88 531
Credit 1 unit.

M93 NrsSci 533 Mentored Research Experience IV

This course is the fourth in a five serial mentored research course series designed to provide one-to-one mentoring for students to have hands-on research experiences and gain skills necessary to conduct interdisciplinary research. Students will be paired with a nursing mentor and a non-nursing mentor. In courses I and II, students will learn about a chosen research project led by the non-nursing mentor and work with his/her research team. In courses III and IV, under the supervision of both nursing and non-nursing mentors, students will identify a scientific challenge that is significant to nursing. Students will then develop a research plan integrating methods from a non-nursing discipline to address the challenges. In course V, students will work closely with the nursing and non-nursing mentors in developing their dissertation research proposal. PREREQUISITE: L88 532
Credit 1 unit.

M93 NrsSci 534 Mentored Research Experience V

This course is the final in a five serial mentored research course series designed to provide one-to-one mentoring for students to have hands-on research experiences and gain skills necessary to conduct interdisciplinary research. Students will be paired with a nursing mentor and a non-nursing mentor. In courses I and II, students will learn about a chosen research project led by the non-nursing mentor and work with his/her research team. In courses III and IV, under the supervision of both nursing and non-nursing mentors, students will identify a scientific challenge that is significant to nursing. Students will then develop a research plan integrating methods from a non-nursing discipline to address the challenges. In course V, students will work closely with the nursing and non-nursing mentors in developing their dissertation research proposal. PREREQUISITE: L88 533
Credit 1 unit.

M93 NrsSci 540 Qualifying Exam
The qualifying examination consists of the student's oral presentation of their dissertation proposal to their committee. The qualifying examination will take place once the written dissertation proposal is approved by the dissertation committee.
Credit 1 unit.

M93 NrsSci 550 Dissertation
Original investigation research experience designed by student to prepare for completing proposed research, public defense, and publication of dissertation as based on student's substantive areas of interest and program of research. Offered every semester.
Credit variable, maximum 4 units.

M93 NrsSci 9000 Full-time Graduate Research/Study