

College of Nursing

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Associate Dean for Undergraduate Programs

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Assistant Dean for Graduate Practice Programs

- Mary S. Dirks

Director, Ph.D. Program

- Sandra E. Daack-Hirsch

Undergraduate degree: B.S.N.

Graduate degrees: M.S.N.; D.N.P.; Ph.D. in nursing

Graduate certificates: advanced practice nursing; nursing advanced practice

Faculty: <https://nursing.uiowa.edu/faculty-staff/faculty-directory>

Website: <https://nursing.uiowa.edu/>

The College of Nursing is an integral part of the University of Iowa health science campus, sharing in and contributing to teaching, research, and patient care resources that have earned international recognition. The University provides an unusually fine setting for nursing preparation because the educational and clinical resources vital to educating nurses are available on or near the campus. Faculty and students participate fully in University life and contribute their time, interests, and abilities to the many general and special activities of a major research university.

The college's Bachelor of Science in Nursing (B.S.N.), the Clinical Nurse Leader (CNL) program (in the Master of Science in Nursing), and the Doctor of Nursing Practice (D.N.P.) programs are accredited by the Commission on Collegiate Nursing Education (CCNE), an autonomous accrediting arm of the American Association of Colleges of Nursing (AACN). They also are approved by the Iowa Board of Nursing. The anesthesia nursing program (in the Doctor of Nursing Practice) is accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs.

Graduates of the prelicensure B.S.N. qualify to take the National Council Licensure Examination (NCLEX) required for practice as registered nurses (RN). Graduates of advanced practice majors in the graduate program are eligible to take certification examinations and apply for Advanced Registered Nurse Practitioner (ARNP) licensure.

Related Certificate or Minor: Aging and Longevity Studies

College of Nursing students may participate in the Aging and Longevity Studies Program, which provides undergraduate students with a multidisciplinary approach to gerontology. The program offers a certificate and a minor. Students plan their course of study with their academic advisor in close cooperation with the Aging and Longevity Studies Program coordinator. See Aging and Longevity Studies (College of Liberal Arts and Sciences) in the Catalog for details. The Aging and Longevity Studies Program is administered by the School of Social Work (College of Liberal Arts and Sciences).

Related Certificate: Informatics

The Graduate College offers the Certificate in Informatics with a subprogram in health informatics. The subprogram emphasizes the organization, management, and use of health care information; health care research, education, and practice; and information technology developments in the socioeconomic context of health care.

College of Nursing students working toward the certificate complete IGPI:5200 Health Informatics I, which explores decision-making processes and technological tools to support health care administration, management, and practice; and EPID:5200 Principles of Public Health Informatics, which focuses on systematic applications of information science, computer science, and technology to public health practice, research, and learning; methods of disease surveillance, data collection, analysis, and reporting with health informatics.

Students earn additional credit in foundational informatics course work, including one elective chosen in consultation with their major program advisor and their certificate advisor. Students who earn credit for a thesis, project, or independent study in their major program of study may apply the credit as an elective if the certificate advisor determines that the subject matter is pertinent.

To learn more, see the Certificate in Informatics (Graduate College) section of the Catalog. For additional information, see Health Informatics on the Graduate College website.

Professional Improvement

Registered nurses who wish to take University of Iowa course work to fulfill professional or personal improvement objectives may request admission in the professional improvement (PI) category. This admission status allows students to take some graduate courses at the University without committing to a degree objective.

Admission as a nursing professional improvement student requires a formal application, including submission of three current written recommendations and all academic transcripts. Graduate Record Examination (GRE) General Test scores, required by the University, must be submitted before the end of first semester registration.

Application deadlines are July 15 for fall semester admission, December 1 for spring semester admission, and May 1 for summer session admission.

Since acceptance as a PI student does not influence acceptance to the college's graduate degree programs, PI students interested in earning a graduate degree in nursing must apply for admission to the degree program (see Programs [p. 2] and then "Admission" under each graduate program of study in this section of the Catalog).

Students may count a maximum of 6 s.h. or two required nursing core courses that they complete as PI students toward M.S.N. requirements. Professional improvement students may not enroll in Ph.D. courses.

Continuing Education

The college offers nonacademic, short-term continuing education programs for nurses. Continuing Education Units (CEUs) are awarded for these programs. The College of Nursing is an Iowa Board of Nursing approved provider of continuing education (Provider Number 1).

Student Organizations

All College of Nursing B.S.N. prelicensure students are members of the National Student Nurses Association and its local chapter, the Iowa Association of Nursing Students (IANS). The University of Iowa Association of Nursing Students (UIANS) provides opportunities for professional growth and development in nursing. UIANS representatives are members of the University of Iowa Student Government (UISG).

The University of Iowa Multicultural Nursing Association (UIMNA) provides support, network opportunities for leadership and professional growth, and development for underrepresented students who are undergraduate nursing interest and nursing majors, graduate nursing students, and underrepresented nursing professionals in the region.

University of Iowa Men in Nursing (UIMIN) provides opportunities for nurses to meet, to recruit, to talk, and to influence the environment for men in nursing. It is open to all nursing students.

The college's Association of Graduate Nursing Students (AGNS) provides opportunities for professional growth, sharing of research, and representation on varied college and University committees.

See Nursing Student Organizations on the College of Nursing website.

Programs

Undergraduate Program of Study Major

- Bachelor of Science in Nursing

Graduate Programs of Study Majors

- Master of Science in Nursing
- Doctor of Nursing Practice
- Doctor of Philosophy in Nursing

Certificates

- Certificate in Advanced Practice Nursing
- Certificate in Nursing Advanced Practice

Facilities

The College of Nursing Building is centrally located on the University's main campus, in close proximity to the Carver College of Medicine, the College of Dentistry, the College of Pharmacy, the College of Public Health, University of Iowa

Hospitals and Clinics, and the Hardin Library for the Health Sciences.

Administrative offices are located on the first floor, a research suite is on the second floor, and faculty offices are on the third and fourth floors. The lower level houses the Office of Student Services, a student lounge, a computer lab, and the doctoral student office, with desk space, access to computers, a printer, a copier, and a meeting space. Classrooms are located throughout the building.

The Nursing Clinical Education Center provides clinical experiences for nursing students and serves as a resource for the University's professional nursing staff. Located at University of Iowa Hospitals and Clinics, the center offers the latest technology in an 11-room clinical simulation lab. It also has an 86-seat classroom, a resource library, and gathering spaces for private study. The center is operated collaboratively by the College of Nursing and UI Hospitals and Clinics Department of Nursing Services and Patient Care.

Courses

College of Nursing Courses

NURS:1020 First-Year Seminar 1 s.h.

Introduces first-year undergraduate students to the intellectual life of the University of Iowa; provides an opportunity to work closely with a faculty member or senior administrator; seminars help students make the transition to college-level learning through active participation in their own learning.

NURS:1030 Human Development and Behavior 3 s.h.

Normal developmental transitions experienced by individuals and family systems throughout the lifespan, including physical, cognitive, and social-emotional development. Requirements: nursing or nursing-interest major.

NURS:1700 Global Health Nursing 3 s.h.

Complexity of health and nursing in a global context; overview of the biological, social, epigenetic, and environmental contributors to health and diseases in populations around the world and nursing's role in improving health; includes case studies of various global organizational and educational structures and systems relative to population health, selected infectious diseases, nutritional deficiencies, and health effects of environmental change. Same as GHS:1700.

NURS:1800 Aging Matters: Introduction to Gerontology 3 s.h.

Overview of the field of gerontology from a bio-psycho-social framework; how the human body and brain age, effects of these biological changes on physical and cognitive functions, and interaction of these individual factors with societal contexts; broad perspective to give students a foundation in gerontology, paving the way for more advanced courses in biology of aging, psychology of aging, and global aging; for students from a wide range of disciplines and levels, no prior knowledge of aging required. GE: Social Sciences. Same as ASP:1800, CSD:1800, SSW:1800, TR:1800.

NURS:3099 Leadership U 1-3 s.h.

Development of leadership in nursing; application of leadership theory in practice by participating in activities such as attending professional organization meetings, acting as a delegate, writing legislation, holding a board position, or being part of a multidisciplinary or international team to organize events for community involvement. Requirements: nursing major.

- NURS:3110 Healthcare Finance** 3 s.h.
Basic structure of U.S. health care system and how it is funded; tools for making decisions about available financial resources.
- NURS:3128 Health Assessment and Communication Across the Lifespan** 3 s.h.
Assessment and communication skills; development and application of cognitive skills to perform systematic, holistic, and culturally competent health assessments; emphasis on application of clinical reasoning involving assessment, nursing diagnoses, interventions, and outcomes. Corequisites: NURS:3138 and NURS:3150 and NURS:3160 and NURS:3518. Requirements: admission to the College of Nursing.
- NURS:3138 Nursing and Pharmacological Interventions I** 5 s.h.
First of a two-part series focusing on basic biophysical concepts that inform nursing and pharmacological interventions, including sleep, immobility, skin care, wound healing, infection, and human response to illness; selected disorders and/or diseases, including GI disease, disorders of bowel and urine elimination, diabetes, and cancer; introduction to health literacy and principles of health education. Prerequisites: CHEM:1070 and MATH:1440 and BIOL:1141 and ACB:3110 and MICR:3164 and (HHP:1300 or HHP:3500) and CHEM:1080. Corequisites: NURS:3128 and NURS:3150 and NURS:3160 and NURS:3518. Requirements: 64 s.h. of undergraduate course work, including successful completion of required science courses and general education liberal arts and sciences requirements and electives.
- NURS:3150 Clinical Simulation Laboratory I** 3 s.h.
First of a two-part series focusing on laboratory-based learning and simulation experience involving basic biophysical and psychosocial assessment skills needed to provide safe and effective nursing care across diverse settings and populations; emphasis on development of nurse-patient and intra- and inter-professional communication skills. Requirements: admission to the College of Nursing.
- NURS:3160 Professional Role I: Professionalism and Patient Safety** 3 s.h.
Introduction to inherent nursing values, history, theories, and scope of professional nursing; concepts of safety, risk identification, and clinical decision making; information technologies that promote quality and safety. Requirements: admission to the College of Nursing.
- NURS:3198 Distance Education: Independent Study** 1-3 s.h.
Supervised study designed for individual undergraduate students.
- NURS:3199 Independent Study** 1-3 s.h.
Supervised study designed for individual undergraduate students.
- NURS:3438 Nursing and Pharmacological Interventions II** 5 s.h.
Second of a two-part series focusing on complex biophysical concepts that inform nursing and pharmacological interventions, including fluids and electrolytes, shock, and perioperative care; focus on selected disorders and/or diseases, including neurological, immune, musculoskeletal, cardiovascular, respiratory, renal, and endocrine disorders. Prerequisites: NURS:3518 and NURS:3138 and NURS:3128 and NURS:3150 and NURS:3160. Corequisites: NURS:3450 and NURS:3460 and NURS:3620 and NURS:3625.
- NURS:3450 Clinical Simulation Laboratory II** 2 s.h.
Second of a two-part series focusing on laboratory-based learning and simulation experience involving complex biophysical and psychosocial assessment skills, critical thinking, and decision making needed to provide safe and effective nursing care across diverse settings and populations; emphasis on development of clinical reasoning skills across the lifespan, including end-of-life care. Prerequisites: NURS:3150 and NURS:3128 and NURS:3518 and NURS:3160 and NURS:3138. Corequisites: NURS:3438.
- NURS:3460 Professional Role II: Research** 3 s.h.
Introduction to concepts and process of research in nursing; primary focus on understanding research and its foundation for nursing practice. Requirements: basic statistics. Recommendations: upper-level statistics.
- NURS:3518 Pathology** 3 s.h.
Introduction to abnormal functioning of cells, tissues, organs, and systems over the human lifespan; focus on hematological, immune, neurological, musculoskeletal, cardiovascular, respiratory, renal, gastrointestinal, endocrine, and reproductive system; alterations in metabolic processes and alterations in homeostatic mechanisms impacting the internal milieu; emphasis on critical thinking. Prerequisites: (CHEM:1080 and ACB:3110 and BIOL:1141 and MICR:3164 and CHEM:1070 and (HHP:1300 or HHP:3500)) or NURS:3734. Requirements: admission to the College of Nursing.
- NURS:3595 Nonprofit Organizational Effectiveness I** 3 s.h.
Operational and financial aspects of nonprofit management; mission and governance of organization; strategic planning for effective management, including finance, budget, income generation, fund-raising. Same as ENTR:3595, MGMT:3500, MUSM:3500, RELS:3700, SSW:3500.
- NURS:3600 Nonprofit Organizational Effectiveness II** 3 s.h.
Qualities for leadership of nonprofit organizations, including relationships with staff and volunteers; relationship of nonprofit and outside world; marketing, public relations, advocacy strategies for nonprofits. Same as MGMT:3600, RELS:3701, SSW:3600.
- NURS:3615 Adult Medical/Surgical Nursing Practicum** 3 s.h.
In-depth clinical experience; application of basic and complex concepts of nursing care for adults of all ages in a variety of settings, focus on older adults; development and application of critical thinking skills necessary to understand disease process, associated signs and symptoms; emphasis on interventions and outcomes. Prerequisites: NURS:3150 and NURS:3128 and NURS:3138 and NURS:3160 and NURS:3518. Corequisites: NURS:3438 and NURS:3450 and NURS:3460 and NURS:3620 and NURS:3625.
- NURS:3620 Gerontological Nursing** 3 s.h.
Nurse's role in promoting, maintaining, and restoring the health of aging adults; internal and external influences on older adults, application of nursing science to the care of older adults in diverse settings. Prerequisites: NURS:3128 and NURS:3138 and NURS:3518 and NURS:3160 and NURS:3150. Corequisites: NURS:3438 and NURS:3450 and NURS:3460 and NURS:3625.

NURS:3625 Gerontological Nursing Practicum 2 s.h.

In-depth clinical experience designed to apply basic and complex concepts of nursing care for adults of all ages in a variety of settings; focus on older adults; development and application of critical thinking skills necessary to understand disease process and the associated signs and symptoms, interventions, and outcomes. Prerequisites: NURS:3160 and NURS:3150 and NURS:3138 and NURS:3128 and NURS:3518. Corequisites: NURS:3438 and NURS:3450 and NURS:3460 and NURS:3615 and NURS:3620.

NURS:3630 Parent-Child Nursing 3 s.h.

Promoting, maintaining, and restoring the health of parents, infants, children, and adolescents in childbearing and childrearing families; nursing care prior to and during pregnancy, labor, and delivery; care of newborns, well children, and children with acute and chronic illness examined within the context of family and community. Prerequisites: NURS:3620 and NURS:3438 and NURS:3450 and NURS:3615 and NURS:3460 and NURS:3625. Corequisites: NURS:3640 and NURS:3645 and NURS:3660.

NURS:3635 Parent Child Nursing Practicum 2 s.h.

Application of nursing knowledge to promote, maintain, and restore health; vulnerable populations of interest including persons with mental health disorders, infants, children, adolescents, their families; processes of childbearing and childrearing within context of families. Prerequisites: NURS:3450 and NURS:3625 and NURS:3620 and NURS:3438 and NURS:3615 and NURS:3460. Corequisites: NURS:3630 and NURS:3640 and NURS:3645 and NURS:3660. Requirements: successful completion of two semesters in B.S.N. curriculum.

NURS:3640 Psychiatric/Mental Health Nursing 3 s.h.

General principles and practices of psychiatric/mental health nursing; psychiatric disorders, populations at risk, continuity of care, and problems in daily living; unique needs of diverse populations. Prerequisites: NURS:3438 and NURS:3620 and NURS:3615 and NURS:3625 and NURS:3460 and NURS:3450. Corequisites: NURS:3630 and NURS:3645 and NURS:3660.

NURS:3645 Mental Health Nursing Practicum 2 s.h.

Application of nursing knowledge to promote, maintain, and restore health; vulnerable populations of interest including persons with mental health disorders, infants, children, adolescents, their families; processes of childbearing and childrearing within context of families. Prerequisites: NURS:3625 and NURS:3438 and NURS:3620 and NURS:3450 and NURS:3615 and NURS:3460. Corequisites: NURS:3630 and NURS:3635 and NURS:3640 and NURS:3660. Requirements: successful completion of two semesters in B.S.N. curriculum.

NURS:3650 Community and Public Health Nursing 3 s.h.

Role of nursing in the relationship between community conditions and public health; emphasis on principles of public health combined with nursing knowledge and skills to address health needs of individuals, families, communities, and populations. Prerequisites: (NURS:3660 and NURS:3640 and NURS:3635 and NURS:3645 and NURS:3630) or NURS:3460. Corequisites: NURS:3655. Requirements: for pre-licensure B.S.N. student—successful completion of NURS:3620, NURS:3625, NURS:3630, NURS:3640, and NURS:3645, and concurrent enrollment in NURS:4155 and NURS:4160; for post-licensure RN-B.S.N. student—successful completion of NURS:4160, 6 s.h. of required nursing elective courses, and completion of general education electives.

NURS:3655 Community and Public Health Nursing Practicum 2 s.h.

Learning opportunities to apply principles of public health with nursing knowledge and skills to address health promotion, disease and injury prevention, and nursing management of infectious disease and chronic health conditions; nursing activities focus on improvement of health outcomes at individual, family, community, and global levels within the context of population-focused practice. Prerequisites: (NURS:3645 and NURS:3635 and NURS:3640 and NURS:3630 and NURS:3660) or NURS:3460. Corequisites: NURS:3650. Requirements: for pre-licensure B.S.N. student—successful completion of NURS:3625 and NURS:3645, and concurrent enrollment in NURS:4155 and NURS:4160; for post-licensure RN-B.S.N. student—successful completion of NURS:3110 and NURS:3160 and NURS:3460 and NURS:3518 and NURS:3660 and NURS:3734 and NURS:4160, 6 s.h. of required nursing electives, completion of general education electives, RN licensure in state of practicum, and concurrent enrollment in NURS:3734, if not taken as a prerequisite.

NURS:3660 Professional Role III: Improving Health Systems 2-3 s.h.

Legal and regulatory processes that impact health care, how disparities influence health care, and evidence-based approaches for improving quality of care; strategies for working effectively in intra and interdisciplinary teams; integration of a culture of safety. Prerequisites: (NURS:3450 and NURS:3615 and NURS:3625 and NURS:3620 and NURS:3460 and NURS:3438) or (NURS:3160 and NURS:3460).

NURS:3712 Human Sexuality, Diversity, and Society 1-3 s.h.

Introduction to human sexuality from a biopsychosocial, sex-positive perspective; sexuality as a normal and essential component of human existence and expression throughout the life span; influence of gender, class, religion, race, ethnicity, sexual orientation, ability status, age, and culture on sexuality interwoven and highlighted; diversity of perspectives and experiences shared through active participation and respectful dialogue. Same as SSW:3712.

NURS:3715 Health Disparities and Cultural Competence 2-4 s.h.

Characteristics, causes, and effects of health disparities in the U.S. health care system; foundation for development of knowledge, attitudes, and skills required of culturally competent health care providers; definitions and models of cultural competence, characteristics of culturally effective practitioners and workplaces; health disparities among specific populations, evidence for cultural competence as a remedy; taking a culturally appropriate history; working with interpreters; legal and professional imperatives for cultural competence. Same as PHAR:8715.

NURS:3728 Quality Improvement and Patient Safety 2 s.h.

Students work with faculty and staff involved in quality improvement and patient safety (QI/PS) at University of Iowa Hospitals and Clinics (UIHC); readings, didactic sessions, and hands-on activities to advance knowledge and practice of QI/PS in health care; activities include review of ongoing QI/PS projects at UIHC, application of QI/PS methodologies to project development and analysis, individual and team-based simulations, interdisciplinary collaboration and communication, participating in conferences related to QI/PS, and reflecting on these experiences with peers. Same as MED:8410.

- NURS:3730 Teaching and Learning Online** 3 s.h.
Synthesis and critical evaluation of current knowledge regarding use of online learning as a tool; empirical research, best practices, and available resources to support effective implementation and management of online learning; skill development and practice; web-based course.
- NURS:3734 Introduction to Human Genetics** 3 s.h.
Introduction to organization of the human genome and basic principles of inheritance in humans; cells and development, chromosome structure and function, gene structure and function, genes in pedigrees and populations, implications of genetic variation on health.
- NURS:3736 Legal Issues for Health Care Providers** 3 s.h.
Legal issues faced by health care providers, counselors, and social services providers; administrative and regulatory requirements, civil lawsuits, issues that affect students as providers, advocates, and individuals.
- NURS:3737 Care of the Patient in Pain** 3 s.h.
Foundational and advanced content in the area of pain management across populations, the lifespan, and settings of care; content and learning focus on core competencies for pain management recommended of all health care professionals; emphasis on development of interdisciplinary team, including nurses, as an advocate for quality and safe pain management; content areas include type of pain, pain therapies, assessment and measurement, treatment, self-management, evaluation/monitoring, disparities, and bioethics; no clinical component. Requirements: upper-division standing. Recommendations: pharmacology and pathophysiology.
- NURS:3739 Women and Their Bodies in Health and Illness** 3 s.h.
Basic facts about structure and functioning of female body; particular attention to adjustments the body makes during normal physiological events (menstruation, sexuality, reproduction, menopause) and during illness processes; women's mental and physical health issues in relation to women's lives and roles in society; relationship of women as consumers, practitioners, and activists to health system; achievements and limitations of women's health movements; anti-oppression, intersectionalities, and cross-cultural perspectives. Same as GWSS:3177.
- NURS:3740 End-of-Life Care for Adults and Families** 3 s.h.
End-of-life issues in care of adults, older adults, and their families. Same as ASP:3740, MED:3740, PHAR:3740.
- NURS:3742 Selected Topics in Nursing** 1-2 s.h.
In-depth study of topics in professional nursing practice and health care; workshop format.
- NURS:3743 Perioperative Nursing** 3 s.h.
Patient assessments, nursing interventions, and patient responses for individuals undergoing surgical procedures; phases of perioperative care including preoperative assessment, patient education, intraoperative care, and post-anesthesia care will be emphasized in this course. Prerequisites: NURS:3615. Requirements: prerequisite course or RN licensure.
- NURS:3744 Critical Care Nursing** 3 s.h.
Provides nursing students with the knowledge required to safely and competently care for critically ill or injured patients; builds upon foundational courses in medical/surgical acute care. Prerequisites: NURS:3615. Requirements: prerequisite course or RN licensure.
- NURS:3781 Clinical Instruction in Nursing Education** 3 s.h.
Role and functions of the nurse educator in the clinical setting; development of teaching strategies and learning activities that support effective clinical and laboratory instruction; evidence-based teaching and evaluation practices; how to incorporate the core concepts of critical thinking for clinical decision-making, effective communication, and cultural competence into clinical experiences; learners with diverse learning styles and backgrounds; ethical and legal implications in clinical teaching and evaluation of learning; technology and emerging trends that impact teaching in the clinical setting. Requirements: RN-B.S.N. or graduate standing.
- NURS:4096 Distance Education: Honors Independent Study** 3 s.h.
Supervised study designed for individual honors undergraduate students.
- NURS:4098 Honors Seminar** 1 s.h.
Crafting a meaningful honors project; structured steps for development of a project idea, measurable learning objectives, GANTT chart timeline, beginning literature review related to the independent study subject; identification/completion of organizational requirements such as approval processes, access to electronic systems, and training.
- NURS:4099 Honors Independent Study** 3 s.h.
Supervised study designed for individual honors students.
- NURS:4155 Senior Nursing Internship** 5 s.h.
Immersion capstone experience to engage in practice under direct supervision of a professional registered nurse mentor; design, provide, coordinate, and evaluate care; work with teams to deliver evidence-based care; improve quality, patient safety, and outcomes. Prerequisites: NURS:3640 and NURS:3660 and NURS:3635 and NURS:3630 and NURS:3645. Corequisites: NURS:3650 and NURS:3655 and NURS:4160.
- NURS:4160 Professional Role IV: Leadership and Professional Engagement** 3,5 s.h.
Concepts of leadership, followership, management, informatics, and professional engagement; quality improvement strategies and skills; professional development, career trajectory, and role transitions. Prerequisites: (NURS:3660 and NURS:3645 and NURS:3635 and NURS:3630 and NURS:3640) or (NURS:3460 and NURS:3160 and NURS:3660). Corequisites: NURS:3660, if not taken as a prerequisite.
- NURS:4170 Baccalaureate Seminar** 1 s.h.
Examination of didactic and clinical learning experiences; documentation of changes in knowledge, skills, and attitudes to demonstrate achievement of relevant competencies; group discussion and reflective writing assignments to evaluate professional growth that has occurred during the B.S.N. program.
- NURS:4205 Communication for the Professional Nurse** 0 s.h.
Communication with all members of a health care team to deliver safe, high quality care; introduction to transition stages, survival strategies, journaling and reflecting; how to develop a professional growth plan; first in a three-part series. Requirements: enrollment in online nurse residency program.
- NURS:4210 Responsibilities of the Professional Nurse** 0 s.h.
Understanding and application of concepts of safety, quality improvement, and evidence-based practice to improve patient care; second in a three-part series. Prerequisites: NURS:4205. Requirements: enrollment in online nurse residency program.

NURS:4215 Decision Making at the Point of Care 0 s.h.

Making the right decision when providing care to all patients to deliver safe and high quality care; third in a three-part series. Prerequisites: NURS:4205 and NURS:4210. Requirements: enrollment in online nurse residency program.

NURS:4216 Group Facilitation in Human Sexuality 0-3 s.h.

Principles of group dynamics, group process; leadership skills for small, task-oriented discussion groups on human sexuality. Prerequisites: SSW:3712. Same as SSW:4216.

NURS:5002 Leadership and Management Essentials 3 s.h.

Roles and strategies for leading and managing others in health care environments to influence health care delivery and provide a healthy, innovative working environment; focus on selected leadership and organizational concepts essential to leaders in health care.

NURS:5007 Applied Epidemiology 3 s.h.

Basic principles and methods of epidemiology; application to field of nursing and nursing research; historical perspective of epidemiology, epidemiological models of health and disease, measures of disease occurrence and association, disease screening, causal inference, study design and application of epidemiological approaches to clinical practice, program planning and evaluation.

NURS:5008 Foundations of Nursing Science I 3 s.h.

Integration of interdisciplinary theories and philosophies of science relevant to nursing; emphasis on application of theory and philosophy in advanced nursing practice and research.

NURS:5009 Evaluating Evidence for Practice 3 s.h.

Opportunity for clinicians to develop proficiency in use of research- and evidence-based practice; essentials of the research process, qualitative and quantitative research, components of evidence-based practice; acquisition of knowledge and skills necessary for research (knowledge) utilization initiatives and application of evidence-based practice principles in clinical settings; identification of appropriate research questions, synthesis of knowledge base for evidence-based practice, revision of clinical practice guidelines, and evaluation of research utilization and evidence-based practice initiatives.

NURS:5015 Health Systems, Finance, and Economics 3 s.h.

Global, economic, organizational, legal, political, and technological contexts in advanced nursing practice; knowledge and skills necessary for understanding the evolution of health services organizations, financing of health care, and relationships among socioeconomic systems influencing health care and nursing practice; impact of macrosystems on distribution, acquisition, and use of financial and economic principles in delivery of health care services. Prerequisites: NURS:5002.

NURS:5016 Health Care Infrastructure and Informatics 3 s.h.

Health care infrastructure with a focus on the United States; role of information and technology in its development and implementation; role of data sets, information technology, and emerging technologies in supporting providers in managing patient care and population health of vulnerable groups. Prerequisites: NURS:5002 and NURS:5015.

NURS:5017 Quality and Safety 3 s.h.

Foundation for understanding concepts of safety and quality across health care settings; providing a safe environment; elevating staff performance and clinical outcomes related to safety and quality; methods for continuous improvement.

NURS:5018 Clinical Education in the Care Environment 3 s.h.

Preparation to assume role of educator with individuals, groups, and communities, including staff and students; teaching/learning process for providing client education; knowledge and skills needed to effectively fill role of preceptor/mentor.

NURS:5019 Role Development: Educator in a Practice Discipline 3 s.h.

Becoming an educator in a practice discipline; unique knowledge, skills, approaches to didactic and clinical teaching; overview of curriculum development process that affects revision/development; faculty role in curriculum development and evaluation; knowledge and skills to create a learner-centered environment for professional students; key facilitation and evaluation strategies; application of concepts during field experience working directly with experienced faculty.

NURS:5020 Application of Educator Role Competencies 1-3 s.h.

Individually designed activities to strengthen performance as an educator in a practice discipline; meet with experienced instructor to develop specific objectives and related activities to be completed during a 45-hour field experience. Prerequisites: NURS:5019.

NURS:5021 Physiology, Pathophysiology, and Pharmacology I for the Clinical Nurse Leader 3 s.h.

Basic scientific concepts required for B.S.N. and clinical nursing experience; matches physiology and pathophysiology with pharmacological treatments as combined core elements; focus on regulation of cellular, organ, and system functions; regulation of internal milieu; functional interrelationships among body systems; cellular and body-wide defense mechanisms; synthesis of information related to pathophysiological phenomena; pharmacokinetic and pharmacodynamics principles essential for general practice; specific drug classes used in management of clinical conditions. Two semesters.

NURS:5022 Physiology, Pathophysiology, and Pharmacology II for the Clinical Nurse Leader 3 s.h.

Basic scientific concepts required for B.S.N. and clinical nursing experience; matches physiology and pathophysiology with pharmacological treatments as combined core elements; focus on regulation of cellular, organ, and system functions; regulation of internal milieu; functional interrelationships among body systems; cellular and body-wide defense mechanisms; synthesis of information related to pathophysiological phenomena; pharmacokinetic and pharmacodynamics principles essential for general practice; specific drug classes used in management of clinical conditions. Two semesters. Prerequisites: NURS:5021.

NURS:5023 Pathophysiology for Advanced Clinical Practice I**2 s.h.**

Builds on foundational knowledge of human physiology; in-depth study of pathophysiologic processes across lifespan; focus on dysregulation of cellular, organ, and system functions, clinical manifestations of common disease states, resultant physiological responses to internal milieu, interrelationships among body system; cellular and body-wide defense mechanisms; synthesis of evidence-based information from varied sources related to selected pathophysiological phenomena. Two semesters. Corequisites: NURS:5033. Requirements: graduate-level physiology course.

NURS:5024 Pathophysiology for Advanced Clinical Practice II**2 s.h.**

Builds on foundational knowledge of human physiology; in-depth study of pathophysiologic processes across lifespan; focus on dysregulation of cellular, organ, and system functions, clinical manifestations of common disease states, resultant physiological responses to internal milieu; interrelationships among body system, cellular and body-wide defense mechanisms; synthesis of evidence-based information from varied sources related to selected pathophysiological phenomena. Two semesters. Prerequisites: NURS:5023. Corequisites: NURS:5034.

NURS:5031 Health Promotion and Assessment for Advanced Clinical Practice**2-5 s.h.**

Didactic and clinical laboratory instruction; emphasis on knowledge and skills necessary for advanced health assessment and health promotion interventions for individuals and families across the lifespan; emphasis on selected populations and persons with specific pathology. Corequisites: NURS:5024 and NURS:5034.

NURS:5032 Mental Disorders in Advanced Practice**3 s.h.**

Foundation for advanced practice nurse to provide care for common mental health disorders; presentation of neurophysiological, genomic, environmental/social, and developmental theories to understand etiology and presentation of common mental health conditions; psychopharmacological and nonpharmacological principles and modalities for treatment of common mental health problems.

NURS:5033 Pharmacotherapeutics for Advanced Practice Nursing I**2 s.h.**

Pharmacotherapeutic principles essential for advanced clinical practice; specific drug classes frequently used in management of clinical conditions experienced by various patient populations; legal considerations related to prescriptive authority and prescribing patterns. First in a two-course series. Corequisites: NURS:5023.

NURS:5034 Pharmacotherapeutics for Advanced Practice Nursing II**2 s.h.**

Pharmacotherapeutic principles essential for advanced clinical practice; specific drug classes frequently used in management of clinical conditions experienced by various patient populations; legal considerations related to prescriptive authority and prescribing patterns. Second in a two-course series. Prerequisites: NURS:5033. Corequisites: NURS:5024.

NURS:5035 Graduate Pharmacology Specialty**2 s.h.**

Principles of pharmacology learned in NURS:5033 and NURS:5034; principles and practices necessary for safe prescribing and medication management of a specialty population (e.g., pediatrics, geriatrics, acute care, mental health). Prerequisites: NURS:5034.

NURS:5036 Psychopharmacology for Advanced Clinical Practice**3 s.h.**

Scientific knowledge of psychopharmacology and its application to treatment of clients with psychiatric disorders across the lifespan; advanced concepts in neuroscience, neurobiology of mental disorders, pharmacokinetics and pharmacodynamics of psychotherapeutic medications in the management of targeted symptoms of psychiatric disorders in clients across the lifespan. Prerequisites: NURS:5024 and NURS:5034.

NURS:5401 The Care of the Frail Elderly**3 s.h.**

Clinical management of the elderly; emphasis on economic considerations, principles of gerontological care, common syndromes, ethical issues; clinical application experience in a long-term care setting. Prerequisites: NURS:5035. Corequisites: NURS:6200 and NURS:6701. Same as ASP:5401.

NURS:5500 Advanced Practice Genetic Nursing I1-3**3 s.h.**

Advanced practice genetic nursing for those at risk for genetic conditions or a condition with a genetic component; application of genetic/genomic science to nursing practice including chromosomal variations; Mendelian and nontraditional inheritance; preconception and prenatal health care in genetics; dysmorphology examinations; developmental delay associated with genetic conditions; application of molecular methodology to clinical and research practice; beliefs about race and ethnicity in the genomic era; ethical, legal, and social implications of genetic nursing. Corequisites: NURS:3734.

NURS:5501 Advanced Practice Genetic Nursing II**1-3 s.h.**

Advanced practice genetic nursing for individuals, families, and populations who are at risk for genetic conditions or who have a condition with a genetic component; application of genetic science to nursing assessments, interventions, and outcomes; genomics and the delivery of health care in primary and public health; pharmacogenetics; genomic therapeutics; childhood onset genetic disorders; adult onset genetic disorders; part two of the Advanced Practice Nursing Genetics course series. Prerequisites: NURS:3734 and NURS:5500.

NURS:5636 Clinical Nurse Leader Seminar**2 s.h.**

Evolution of clinical nurse leader (CNL) role, eight core role functions, and the process of integration of CNL role into health care system.

NURS:5666 Leadership in the Microsystem**3 s.h.**

Assessment of the microsystem of practice, clinical nurse leader role as leader embedded in a microsystem, and identification of opportunities to enhance care delivery in the microsystem.

NURS:5696 CNL Capstone Clinical Immersion**6 s.h.**

Intensive immersion in role and practice expectations of the CNL; experienced leaders within the microsystem, who are experts in the provision of clinical services at the point of care/ services, serve as mentors. Requirements: enrollment in final semester of M.S.N.-CNL program.

NURS:5800 Independent Study**arr.**

Supervised study and/or clinical practice adjusted to needs of master's degree students.

NURS:5801 Master's Project**2-3 s.h.**

Opportunity for in-depth analysis and synthesis of a chosen topic that contributes to some aspect of nursing practice.

- NURS:5802 Master's Portfolio** 0 s.h.
Opportunity for clear and cohesive synthesis of clinical or professional experiences and competencies, including those gained in graduate study, that portray students' clinical or professional strengths and career goals.
- NURS:5803 Distance Education: Master's Independent Study** arr.
Supervised study and/or clinical practice adjusted to needs of master's degree students.
- NURS:5804 Distance Education: Master's Portfolio** 0 s.h.
Clear and cohesive synthesis of clinical or professional experiences and competencies, including those gained in graduate study; students' clinical or professional strengths and career goals.
- NURS:5806 Distance Education: Master's Project** 2-3 s.h.
In-depth analysis and synthesis of a chosen topic that contributes to some aspect of nursing practice.
- NURS:5807 Distance Education: Master's Thesis** arr.
Systematic investigation of a nursing problem of student's choice under guidance of faculty.
- NURS:6000 Human Anatomy for Advanced Practice** 3 s.h.
Integrated study of interrelationships between anatomic structure and physiological function in health and disease at various points in the lifespan; mechanisms governing and supporting cellular, organ, and system function; internal milieu; relationship of study to clinical assessment of functional integrity of individual organ systems utilizing pertinent objective and subjective data; implications of pathophysiology for anesthesia and implications of anesthesia for pathophysiology; foundation for clinical practicums and courses in nurse anesthesia. Requirements: completion of an undergraduate human anatomy and physiology course and admission to anesthesia nursing program. Same as ACB:6000.
- NURS:6005 Chemical and Physical Principles of Anesthesia Practice** 3 s.h.
Basic chemical and physical properties of molecules fundamental to practice of anesthesia; relationship of these properties in relation to physiological processes and pharmacological principles essential in monitoring a patient's physical status and administration of anesthesia medications; basic chemical and physical calculations, properties of substances in solution, measurement of such chemical species, behavior of gases and other fluids, effects of heat transfer, specific chemistry of inhaled and intravenous anesthetics and adjuvant drugs. Requirements: admission to anesthesia nursing program. Same as ANES:6005.
- NURS:6006 Pharmacology of Anesthesia Practice** 3 s.h.
Builds on content from foundational graduate pharmacology course; focus on safe prescribing, administration, and management of medications used to provide general, regional, or local anesthesia and analgesia for all patient populations across lifespan undergoing varied surgical, obstetrical, or other procedures in any health care setting. Prerequisites: PCOL:6204 with a minimum grade of B-. Requirements: enrollment in anesthesia nursing program. Same as ANES:6006.
- NURS:6007 Basic Principles of Anesthesia Practice** 5 s.h.
Overview and integration of anesthetic agents and techniques; patient assessment, preoperative airway evaluation, anesthetic planning, principles of fluid management, and arterial blood gas interpretation; principles of general and regional anesthesia and techniques as they pertain to each surgical specialty; Occupational, Safety and Health Administration (OSHA), The Joint Commission (TJC), and institutional regulations and requirements pertinent to anesthesia practice. Prerequisites: NURS:6006 with a minimum grade of B- and NURS:6016 with a minimum grade of B-. Same as ANES:6007.
- NURS:6010 Advanced Principles of Anesthesia Practice I** 4 s.h.
Special needs and intraoperative anesthetic management of complex patient populations and those with advanced pathologic states; anesthetic techniques for specific surgical subspecialties including pediatrics, obstetrics, neurosurgery, cardiac, vascular, thoracic, transplant, trauma, EENT, dental, and aesthetic or reconstructive procedures; pertinent pathophysiology and anesthetic monitoring and management techniques; clinical case conferences provide opportunities to discuss perianesthetic complications and challenges. Prerequisites: NURS:6007 with a minimum grade of B- or ANES:6007 with a minimum grade of B-. Same as ANES:6010.
- NURS:6012 Advanced Principles of Anesthesia Practice II** 1 s.h.
Acute and chronic pain treatment modalities for all patients presenting for a variety of medical or surgical procedures across the lifespan. Prerequisites: NURS:6007 with a minimum grade of B- or ANES:6007 with a minimum grade of B-. Same as ANES:6012.
- NURS:6016 Equipment and Technological Principles of Anesthesia Practice** 3 s.h.
Introduction to gas and anesthesia delivery systems, ancillary equipment, monitoring devices, infusion devices, invasive line placement, airway management equipment, and anesthesia electronic medical record keeping; correlation of applicable chemical and physical principles for use, safe operation, and care of all anesthesia and related equipment. Prerequisites: NURS:6005 or ANES:6005. Corequisites: NURS:6006. Requirements: anesthesia nursing program enrollment. Same as ANES:6016.
- NURS:6050 Introductory Clinical Anesthesia** 2 s.h.
Initial mentorship in clinical anesthesia; development of basic clinical skills needed for a career as nurse anesthetist; application and integration of theoretical knowledge in clinical setting. Prerequisites: NURS:6006 and NURS:6016. Corequisites: NURS:6007. Same as ANES:6050.
- NURS:6051 Clinical Anesthesia I** 2 s.h.
Mentored clinical anesthesia experience; advancement and enhancement of clinical skills in providing anesthesia for various surgical subspecialties including general, orthopedic, pediatric, geriatric, gynecologic, urologic, dental, EENT, ambulatory surgery, and invasive diagnostic procedures. Prerequisites: NURS:6050 or ANES:6050. Corequisites: NURS:6010. Same as ANES:6051.

- NURS:6052 Clinical Anesthesia II** 2 s.h.
Additional mentored clinical anesthesia experience; advancement and enhancement of clinical skills in providing anesthesia for various surgical subspecialties including general, orthopedic, pediatric, geriatric, gynecologic, urologic, dental, EENT, ambulatory surgery, and invasive diagnostic procedures. Prerequisites: NURS:6051 or ANES:6051. Same as ANES:6052.
- NURS:6053 Advanced Clinical Anesthesia** 2 s.h.
Mentored clinical anesthesia at selected sites; development of advanced clinical skills and critical thinking by providing anesthesia for all surgical specialties and invasive diagnostic procedures in all anesthetizing locations; providing anesthesia for all patients in all settings, including on call emergency surgeries. Prerequisites: NURS:6052. Same as ANES:6053.
- NURS:6054 Obstetrical Anesthesia** 2 s.h.
Experience delivering analgesia and anesthesia for parturients during labor and delivery process. Prerequisites: NURS:6052. Same as ANES:6054.
- NURS:6055 Rural Anesthesia** 2 s.h.
Opportunity to develop experience providing anesthesia and associated health care services at UI-affiliated clinical sites in rural settings. Prerequisites: NURS:6052. Same as ANES:6055.
- NURS:6100 Primary Care: Infants, Children, and Adolescents I** 3 s.h.
Enhancement of clinical knowledge and skills for infant, child, adolescent care. Prerequisites: NURS:5035. Corequisites: NURS:6701.
- NURS:6101 Primary Care: Infants, Children, and Adolescents II** 3 s.h.
Enhancement of clinical knowledge and skills for infant, child, adolescent care; development and refinement of knowledge and skills in primary health care delivery. Prerequisites: NURS:6100. Corequisites: NURS:6702. Same as PEDS:6101.
- NURS:6200 Primary Care: Adults and Older Individuals I** 3 s.h.
Pathophysiologic alterations and clinical management of associated health care problems in adults, the elderly. Prerequisites: NURS:5035. Corequisites: NURS:6701.
- NURS:6201 Primary Care: Adults and Older Individuals II** 3 s.h.
Continuation of NURS:6200. Prerequisites: NURS:6200. Corequisites: NURS:6702.
- NURS:6400 Pediatric Acute Care I** 3 s.h.
First of two courses exploring management of complex acute, critical, and chronically ill patients with urgent and emergent conditions; focus on alterations in pathophysiology, advanced assessment, diagnosis, and collaborative management of infants, children and adolescents with selected episodic/chronic health problems in acute/critical care. Prerequisites: NURS:5035. Corequisites: NURS:6701.
- NURS:6401 Pediatric Acute Care II** 3 s.h.
Second of two courses exploring management of complex acute, critical, and chronically ill patients with urgent and emergent conditions; focus on alterations in pathophysiology, advanced assessment, diagnosis, and collaborative management of infants, children and adolescents with selected episodic/chronic health problems in acute/critical care. Prerequisites: NURS:6400. Corequisites: NURS:6702.
- NURS:6410 Adult-Gerontology Acute Care I** 3 s.h.
First of two courses exploring management of complex acute, critical, and chronically ill patients with urgent and emergent conditions; focus on alterations in pathophysiology, advanced assessment, diagnosis, and collaborative management of adults and older adults with selected episodic/chronic health problems in acute/critical care. Prerequisites: NURS:5035. Corequisites: NURS:6701.
- NURS:6411 Adult-Gerontology Acute Care II** 3 s.h.
Second of two courses building on prior acute care content and focusing on critical, complex, and end of life care; emphasis on evidence-based strategies to stabilize patient's condition, assessment of risk for and prevention of complications, restoration and maintenance of optimal health and functioning, and/or provision of palliative care in context of patient's physical and psychosocial environment. Prerequisites: NURS:6410. Corequisites: NURS:6702.
- NURS:6500 Psychiatric/Mental Health Nursing Theory I** 4 s.h.
Introduction to psychological principles and theories as related to mental health across the life span, intersections between physical and mental health, and role of advanced practice nurse in psychiatric/mental health care; examination of psychological theory in a life span developmental framework from infancy to older adult; role of cultural diversity in mental health; emphasis on assessment, diagnosis, and management of mental disorders common in adults. Prerequisites: NURS:5036. Corequisites: NURS:6701.
- NURS:6501 Psychiatric/Mental Health Nursing Theory II** 4 s.h.
Builds on prior life span content with specific focus on selected populations, families, and groups; define and expand practice of psychiatric/mental health nursing based on integration of theory, standardized languages, and research; varied approaches and issues of service delivery; emphasis on methods and skills for completing a comprehensive mental health assessment and managing common psychiatric illness in childhood/adolescence and late life. Prerequisites: NURS:6500. Corequisites: NURS:6702.
- NURS:6550 Executive Leadership and Management** 3-4 s.h.
Leadership and management concepts and theories; application to roles unique to executive nurse leader in health care organizations in institutional and community settings; emphasis on executive leadership roles for facilitating, integrating, and coordinating complex structures, processes, and outcomes in health care systems.
- NURS:6551 Financial Management** 3-4 s.h.
Preparation for nurse leaders and practitioners to use techniques for financial analysis and decision making for patient care programs across the health care continuum; focus on efficient and effective management of resources for delivery of quality health care services.
- NURS:6552 Managing Care in an Organizational Environment** 3-4 s.h.
Manage operations of patient care services across health care continuum within the framework of an established health care organization; focus on efficient and effective management of the structure, governance, patient care delivery system of care, and outcomes of care.
- NURS:6553 Seminar on Innovations** 4 s.h.
Strategizing about taking meaningful action, disrupting stable processes, diffusing innovation, and sustaining change; emerging innovations in nursing and health care systems that impact the functions and responsibilities of nurse leaders.

NURS:6554 Seminar on Healthy Work Environments**3 s.h.**

Application of leadership and management knowledge specific to creating and sustaining healthy work environments in health care; current and emerging issues focused on health care work environments.

NURS:6555 Care Coordination Across Professional and Organizational Boundaries**3-4 s.h.**

Structures, processes, concepts, tools and experience that leads to effective coordination of patient care, case and population health management as well as information, management and financial systems supporting care coordination; knowledge and skills for understanding structures, processes, challenges, solutions and innovations in coordinating patient care across professional disciplines and organizational boundaries; impacts of care coordination issues on patient experience, care quality and costs; evaluate interventions for informed and effective care processes in field experience.

NURS:6701 Advanced Practice Clinical Practicum I**3-4 s.h.**

Application of advanced physical assessment, pathophysiology, and diagnostic reasoning in a clinical setting appropriate to a specific population. Prerequisites: NURS:5035 or NURS:5036. Corequisites: NURS:6100 or NURS:6400 or NURS:6410 or NURS:6500 or (NURS:5401 and NURS:6200) or (NURS:6100 and NURS:6200).

NURS:6702 Advanced Practice Clinical Practicum II**3-4 s.h.**

Continuation of NURS:6701; emphasis on diagnostic reasoning and formulation of treatment plans. Prerequisites: NURS:6701. Corequisites: NURS:6101 or NURS:6201 or NURS:6401 or NURS:6411 or NURS:6501 or (NURS:6101 and NURS:6201).

NURS:6703 Advanced Practice Clinical Practicum III**3-4 s.h.**

Synthesis of role expectations for advanced practice with focus on clinical competencies appropriate to the specialization. Prerequisites: NURS:6702.

NURS:6704 Practicum in Executive Leadership and Management**4 s.h.**

Immersion experience in application of principles and methods of leadership, management, and evaluation to facilitate health care operations in various settings; student collaboration with a preceptor for mentored in-depth immersion in systems practice.

NURS:6800 Emerging Science**3 s.h.**

Emerging science to prepare leaders, advanced practice practitioners, and researchers to meet challenges of today's workforce and health care environment; opportunities to apply emerging health care science that influence health care policy, education, research, and practice.

NURS:6802 Health Policy, Law, and Advocacy**3 s.h.**

Issues that shape health care economics and policy development; framework for understanding work of legislators and other policy makers; emphasis on state and national level; health issues in developing countries; health care system, its economics, financing, role of government, not-for-profit entities, and nongovernmental organizations.

NURS:6808 Population Health for Advanced Practice**3 s.h.**

Coordination and integration of care delivery for population health and clinical effectiveness across the continuum of care; management of optimized outcomes; emphasis on informatics infrastructure and translation of evidence-based practice to managing care provision and achieving desired outcomes as a result of care provision.

NURS:6809 DNP Role Integration I**2 s.h.**

Knowledge, skills, and abilities required to function in D.N.P. role and as a leader in health care. First in a two-course sequence. Prerequisites: NURS:6052 or NURS:6703 or NURS:6704.

NURS:6810 DNP Role Integration II**2 s.h.**

Synthesis and application of knowledge, skills, and abilities required to function in D.N.P. role and as a leader in health care. Second in a two-course sequence. Prerequisites: NURS:6809.

NURS:6811 Social Determinants of Health and Health System Inequities**3 s.h.**

Social determinants of health outcomes and inequities; social and economic forces that shape them using various perspectives and lenses; conceptualization and measurement of variables representing risk and inequities that serve as the organizing framework for course discussions, including individual and social factors; critical analysis of research studies for social bias.

NURS:6825 Doctor of Nursing Practice Project**1-5 s.h.**

Opportunity for in-depth analysis and synthesis of a practice, system, or policy problem related to advanced nursing practice; development of an evidence-based proposal to benefit a group, population, or community; demonstration of leadership in assessment, planning, implementation, and evaluation; the 5 s.h. may be spread across multiple semesters; incorporated into this course are 370 hours supporting the DNP project. Prerequisites: NURS:5017.

NURS:6900 Computational Intelligence**3 s.h.**

Concepts, models, algorithms, and tools for development of intelligent systems; data mining, expert systems, neural networks for engineering, medical and systems applications. Prerequisites: IE:3700. Same as IE:6350.

NURS:7000 Philosophy and Sociology of Nursing Science**3 s.h.**

Introduction to philosophical, historical, and sociological underpinnings of contemporary science and traces history of nursing as scientific and applied discipline; exploration of the nature of knowledge, different ways of knowing, history of science, various philosophical approaches, goals of knowledge generation; analysis of sociology of science to identify the norms, cultural and political influences, differences among scientific disciplines; emphasis on interdisciplinary science; identification of concepts and conceptual definitions, especially as these differ across disciplines. Requirements: Ph.D. standing.

- NURS:7001 Qualitative Research** 4 s.h. Provides a foundation in the design of qualitative and mixed methods research and analysis of qualitative and mixed methods data; emphasis on interactions among research purpose, question, aims, and interaction of that triad with sampling, setting, data collection, and analysis; using interpretive description as an exemplar, students design and conduct a small qualitative study relevant to their own interests; College of Nursing faculty present overviews of methods in which they have expertise, such as feminist research, ethnography, and narrative. Prerequisites: NURS:7000 and NURS:7002 and NURS:7006. Requirements: Ph.D. standing.
- NURS:7002 Designing Research** 3 s.h. Introduction to designing research studies; identifying a problem and determining overall goal of the study; research goal subsequently leading to purpose, specific aims, and choice of a specific design; focus on issues related to maintaining continuity throughout the design of a study. Prerequisites: NURS:7000 and NURS:7006. Requirements: Ph.D. standing.
- NURS:7003 Quantitative Research** 4 s.h. Refinement of students' understanding of the application of scientific logic; criteria for causality, its application in health-related research; various quantitative methods; sampling theory and approaches to sample selection, recruitment, and methods; issues related to instrument selection, reliability and validity considerations; management of large data sets and maintenance of data integrity; guided exercises, peer sharing, and collaborative groups provide experiences integrated with content in didactic section. Prerequisites: NURS:7000 and NURS:7002.
- NURS:7006 Theory and Model Development** 3 s.h. Critical role of theories in science and the importance of continuous refinement of theory throughout a program of research; focus on theory construction and model building; examination of relationships linking concepts; analysis of structure, scope, and forms of theories/models; construction of micro- or mid-range theories/models using positivistic and inductive approaches; emphasis on critical analysis of literature. Prerequisites: NURS:7000. Requirements: Ph.D. standing.
- NURS:7310 Measurement in Health Research** 3 s.h. How to develop and employ measures that are operationalized within the context of theories and conceptual models; sound measurement principles and practices, as well as adequate testing for reliability and validity using appropriate methods and procedures. Prerequisites: NURS:7006.
- NURS:7403 Advanced Seminar in Health Research** 3 s.h. Health research across the lifespan and health care continuum; specific topics based on the state of the science and emerging science initiatives put forth by NIH and other funding agencies. Requirements: doctoral standing.
- NURS:7404 Biological Markers in Health Research** 3 s.h. Use of biomarkers as surrogate clinical endpoints, measure of behavior, and measures of exposures; judicious integration of biomarkers into an overall program of health research in light of pertinent considerations, including validity and reliability, feasibility and cost. Prerequisites: NURS:6811 and NURS:7002 and NURS:7003.
- NURS:7509 Research Residency** 1-3 s.h. Participation in a research project based on an individualized plan of study, under guidance of an experienced researcher; students register with the respective faculty member for a residency that takes place at the University of Iowa, or register with their advisor for a residency that takes place outside the University of Iowa. Requirements: admission to the Ph.D. in nursing.
- NURS:7800 Independent Study** arr. Supervised study adjusted to needs of doctoral degree students. Requirements: doctoral enrollment.
- NURS:7801 Seminar: Research Scholarship Role Development** 3 s.h. Preparation for successful completion of doctoral course work, comprehensive examination, and dissertation; faculty-guided structure provides opportunities for students to assimilate knowledge and behavior of a scholar and activities that facilitate and optimize socialization and success as nurse scientists and academic faculty. Requirements: Ph.D. standing.
- NURS:7803 Research Practicum I** 2 s.h. First of two practicums that serve as a system of apprenticeship by which students are mentored through selected aspects of scientific processes, methodologies, analysis, and dissemination of results; projects relevant to student's area of study. Requirements: Ph.D. standing.
- NURS:7804 Research Practicum II** 2 s.h. Second of two practicums that serve as a system of apprenticeship by which students are mentored through selected aspects of scientific processes, methodologies, analysis, and dissemination of results; project relevant to student's area of study. Requirements: Ph.D. standing.
- NURS:7805 Dissertation Research** arr.