

NR (NURSING)

NR.110.540. Teaching Strategies in Nursing. 3 Credits.

The principles underlying the teaching of adult learners will be examined and applied to classroom and clinical settings. Emphasis is on application of practical strategies to plan, conduct, and evaluate educational experiences in nursing. Innovative teaching techniques, use of media, evaluation techniques, and test construction/evaluation are addressed. Prerequisite: Baccalaureate degree, some post-Baccalaureate nursing experience

NR.110.543. Teaching Practicum. 1 - 3 Credits.

This course will give students an opportunity to apply concepts of teaching strategies, curriculum theory and design and evaluation in the educator role that is within their area of interest. The student can choose from a variety of opportunities. Pre/corequisites: NR.110.638, 110.540, 110.730, or permission of faculty/advisor

NR.110.560. Program Development and Evaluation in Health Care. 2 Credits.

This online course is an introduction to the development and application of key skills for reflective program design and evaluation. Students will engage in iterative and cumulative skills-based learning related to the different components and steps of the program development and evaluation process. Consideration of context is a critical element of program development and evaluation. For this reason students are strongly encouraged to select a program focus of relevance to their area of professional interest. All the skills taught are essential for success as a program grant writer. Prerequisite: NR.210.606 Corequisite: NR.210.608

NR.110.573. Neurobiology of Mental Disorders. 1 Credit.

Building on fundamental knowledge of anatomy, physiology, and pathophysiology, this course focuses on major mental disorders across the lifespan. Various factors underlying causality of these disorders including developmental, genetic, injury, trauma, infection, and degeneration are explored. Complex networks necessary for maintaining homeostasis within the brain and between the brain and body will be examined in relation to these disorders. This course lays the groundwork for advanced practice nurses caring for individuals with mental disorders including substance use disorders. Corequisites: NR.110.574, 110.575, 110.576 (for PMHNP students only)

NR.110.574. Clinical Psychopharmacology. 2 Credits.

This course provides an overview of the principles and best practices for using psychopharmacology to treat mental disorders across the lifespan. A case-based approach is used to examine the clinical uses, neuropharmacological mechanisms, risks, benefits, and outcomes of commonly used psychotropic drugs in the context of a comprehensive treatment plan. Corequisites: NR.110.573, NR.110.575, and NR.110.576

NR.110.575. Differential Diagnosis of Mental Disorders. 2 Credits.

This course uses a case-based approach to learning differential psychiatric diagnosis. Students develop advanced skills for the differential diagnosis of mental disorders, including observational and interviewing skills, and the use and interpretation of screening tools, laboratory tests, and behavioral assessments. Case studies will utilize the most current edition of the Diagnostic and Statistical Manual for Mental Disorders (DSM 5) and other appropriate nosological methodologies for diagnosis. Corequisites: NR.110.573, NR.110.574, and NR.110.576

NR.110.576. Psychotherapeutic Frameworks and Modalities. 2 Credits.

This course provides an overview of major concepts, theories, and research related to psychotherapeutic treatments for mental disorders across the lifespan. Emphasis is placed on the integration of two content areas: psychotherapeutic case formulation and treatment planning; and the application of evidence-based brief psychotherapies for the treatment of particular disorders, symptoms and issues. Brief applications of Cognitive Behavioral Therapy and Motivational Interviewing will be examined in detail through a case-based learning approach. Corequisites: NR.110.573, NR.110.574, and NR.110.575

NR.110.577. Psychiatric Mental Health Nurse Practitioner Practicum: Adult/Gero. 4 Credits.

This course provides clinical training in the full role of the psychiatric mental health nurse practitioner. Emphasis is placed on the integration of two content areas: the knowledge and skills for PMHNP practice; and the specific mental health needs of adults and older adults. Clinical experiences, lectures, case discussions, and projects allow students the opportunity to develop competencies in the ethical, safe, collaborative, and evidence-based provision of mental health care to adults and older adults in the context of a changing health care system. 250 clinical hours. Prerequisites: NR.110.573, NR.110.574, NR.110.575, and NR.110.576 Corequisite: NR.110.579; NR.110.581 (if needed)

NR.110.578. Psychiatric Mental Health Nurse Practitioner Practicum: Peds/Family. 4 Credits.

This course provides clinical training in the full role of the psychiatric mental health nurse practitioner. Emphasis is placed on the integration of two content areas: the knowledge and skills for PMHNP practice; and the specific mental health needs of children and families. Clinical experiences, lectures, case discussions, and projects allow students the opportunity to develop competencies in the ethical, safe, collaborative, and evidence-based provision of mental health care to children, adolescents and families in the context of a changing health care system. 250 clinical hours. Prerequisites: NR.110.573, NR.110.574, NR.110.575, and NR.110.576 Corequisite: NR.110.580

NR.110.579. Integrated Care I. 1 Credit.

This is the first of two integrated care courses. The focus is on applying the PMHNP and integrated care competencies of systems-oriented practice that include collaboration, teamwork, care coordination and community practice partnerships. Prerequisites: NR.110.572-110.576 Corequisite: NR.110.577

NR.110.580. Integrated Care II. 1 Credit.

This is the second of two integrated care courses and builds off of the first course. The focus of the course is on applying culturally sensitive PMHNP and integrated care competencies to plan and implement population-based screening, care planning, mental health literacy interventions and continuous quality improvement. Prerequisites: NR.110.572-110.576 and 110.579 Corequisite: NR.110.578

NR.110.581. Variations in Health Assessment for Pediatrics and/or Older Adults. 1 - 2 Credits.

This course is designed to prepare experienced advanced practice nurses with the necessary health assessment skills across the full lifespan. Emphasis is placed on the differentiation between normal and abnormal findings and recognition of common health problems. Students will apply complete health assessment skills for pediatric and/or older adult populations including diagnostic reasoning skills necessary to differentiate normal and abnormal findings and address common health problems for patients. This course is an online course that does not include a laboratory component. Prerequisite: Prior Advanced Health Assessment course or permission of faculty.

NR.110.591. Dying & Death: Personal & Professional Perspectives. 1 - 3 Credits.

This elective course will present an overview of concepts and issues related to dying and death. Through presentations, small group discussions and personal reflection, students will be encouraged to explore the personal and professional meanings of loss, grief and bereavement, the dying process, individual behavioral, psychosocial and spiritual responses, family concerns, and religious and cultural influences. Ethical issues, such as dying with dignity and quality of life will also be addressed. Limited enrollment.

NR.110.593. Family Violence. 1 - 3 Credits.

An elective focusing on the causes and extent of violence in the family, human responses to violence, the influence of culture and community on violence in the family and nursing interventions for the problem on the primary, secondary and tertiary prevention levels across the lifespan. Areas of violence in the family to be examined will include child abuse, intimate partner abuse, sexual abuse, violence involving adolescent family members, abuse of elderly family members and homicide. Students can take the course for 1 credit (in person in class first seven weeks of semester – theory and practice readings and discussion and a short in class presentation) two credits (in class for first seven weeks PLUS either a paper or a field placement in a community agency providing services to violent or potentially violent families due end of semester – first week of May or 3 credits – in class sessions, field placement and a paper. Limited enrollment.

NR.110.599. Independent Study. 1 - 3 Credits.

Scholarly activity under guidance of faculty serves to help students achieve professional goals. This course may be taken as elective credit.

NR.110.605. Leadership and Management in Health Care. 3 Credits.

This online course is focused on the analysis, integration and application of principles of leadership and management to health care organizations and to population-based efforts across the public health care delivery system. Special emphasis is placed on the practical skills needed for nurses to succeed as leaders and managers in today's local, state, national and international health care and/or public health environment. Although this course is not clinical, students will have several opportunities to practice leadership-related skills through group case-based learning that will focus on leadership, organizational assessment, financial resource decision making and allocation, diversity in the workforce and quality improvement. Prerequisite: NR.210.609 Recommended corequisite: NR.110.609

NR.110.607. Health Systems Management I. 3 Credits.

Based on the student's past nursing or health care management experience, this individualized planned practicum will provide the student with an opportunity to explore the role of nurse manager or nurse administrator (multiple settings) within the context of a leadership domain and an administrative issue. This clinical practicum course will be an individualized experience in exploring the role of the nurse manager or administrator that will include identification of an issue relevant to their specialty practice. The student will perform a comprehensive analysis of the issue to include a scholarly review and appraisal of the literature, consult with at least three managers/administrators to discuss their role and involvement in the issue of interest, and complete a negotiated leadership role management project.

NR.110.608. Business Plan. 1 Credit.

This course is designed to integrate previous learning involving the important tools for business planning, strategic management techniques and decision making as it relates to a specific case study. Prerequisites: NR.110.609, 110.605, & Financial Management Theory requirement

NR.110.609. Health Systems Management II - Specialty Practice. 3 Credits.

This practicum and the associated content focus on evidence based practice of leadership and management in diverse clinical settings. Students will explore, analyze, and apply specific strategies of management and leadership to the administrative roles of nurses across the contemporary health care environment. Managerial functions of planning, organizing, leading and evaluating will be applied and analyzed by each student during the practicum experience providing opportunities to develop management and leadership skills. Special emphasis will be placed on the theory and practical approach to decision-making within organizations, use of data in day-to-day management activities, quality management, innovation, and management of human capital, time and resources. Seminar discussions will focus on leadership and management tools, team building, organizational assessments, organizational power and politics, organizational ethics, resource allocation, human resources and labor relations, business communication, performance management and career development. 168 clinical hours. Prerequisite: NR.210.609 Recommended corequisite: NR.110.605

NR.110.611. Health Systems Management III - Outcomes Management. 3 Credits.

This capstone course focuses on the application of case management methods in a selected population. Biopsychosocial and ethical concepts, advanced health assessment skills, and systems theory presented in previous course work will be integrated and applied to the advanced specialty health care needs of patients. Proficiency in the entry, validation, analysis and presentation of patient outcomes data will be developed in the computer lab and applied in the clinical setting. 168 clinical hours. Prerequisites: NR.210.606 and NR.110.609

NR.110.612. Diagnosis, Care and Management of Persons with HIV/AIDS (Local to Global). 3 Credits.

This course provides the student with evidence-based clinical management strategies for HIV and HIV/AIDS focusing initially on management of persons locally, then shifting focus at the end of the course to global HIV/AIDS issues. The course will examine diagnostic testing and clinical management strategies for opportunistic infections, common co-morbid conditions in persons with HIV/AIDS, as well as chronic health conditions resulting from HIV therapy. Prevention techniques including vaccination schedules, antimicrobial prophylaxis, and risk-reduction interventions will be discussed. Case studies from inpatient, outpatient, community-based organizations and correctional populations will be used to integrate clinical decision making skills to real world HIV/AIDS case examples. During the last two days of the course, the focus will turn from HIV management in the U.S. to care and management in underserved populations and under resourced settings both in the U.S. and abroad. This section of the course will allow students to identify a focus country to explore HIV/AIDS programmatic issues, care and treatment responses and to develop a focused plan to address a specific need. Prerequisites: NR.210.602 and NR.110.615 for HIV Certificate students; NR.120.507 for Masters Entry students Corequisite: NR.110.613

NR.110.613. Health Assessment: HIV and Associated Comorbidities. 1 Credit.

This clinical course provides the student with an experiential clinical evaluation opportunity for persons with HIV and HIV/AIDS including associated comorbidity. The course will apply didactic instruction from NR.110.612 in the diagnosis, assessment and initial clinical management strategies for opportunistic infections, common co-morbid conditions in persons with HIV/AIDS, as well as chronic health conditions resulting from HIV therapy. Clinical case studies and exemplar patients will be utilized from inpatient and outpatient clinics to integrate clinical decision making skills to real world HIV/AIDS case examples. 56 clinical hours. Prerequisites: NR.210.600, NR.210.602, and NR.110.615 Corequisite: 110.612

NR.110.614. Primary Care for Patients in Limited Resource Settings. 2 - 3 Credits.

This course synthesizes clinical, social, and policy topics for practice involving underserved rural or urban populations. Students will critically evaluate the intersectionality of health issues, disparities, and their underlying policies affecting low resource settings. Students will examine ways to reduce health disparities through resource utilization with consideration of both physical and social environments, diversity, equity, and access along the healthcare continuum. These topics will span from patient interventions with utilize an effective interdisciplinary team to critically evaluating health policy that affects the well-being of their patient population. Clinical Component: HIV Primary Care Certificate Students will complete a clinical rotation in co-morbidity management through specialty clinic rotations. 56 hours Pre/Corequisites: Clinical Practicum I, Clinical Reasoning II, or Permission of Instructor

NR.110.615. Health Disparities in Nursing Practice. 3 Credits.

This course provides the student with a study of health disparities and promotion of health equity across a variety of disease processes. Advanced analysis and evaluation of theories, concepts, and methods related to health equity and disparity, will be examined. Students will have the opportunity to critically examine the links between health outcomes and economics, class, gender, sex, sexuality, race, and ethnicity. Emphasis is on advanced discourse and analysis of health equity and disparity theory and research. The focus of this course will be on multiple levels of analysis from the practitioner-patient interactions to the health care system as a whole. This will include an assessment of the social determinants of health. Students will spend a substantial amount of time engaging in online scholarly discourse and in developing their own specific practice based clinical and research interests in this field culminating in an empirical paper and a conference ready presentation of their findings. Prerequisites: NR.210.601

NR.110.618. Leadership for Complex Learning Organizations. 2 Credits.

This advanced leadership course focuses on the theories and practical application of leadership and management for organizational behavioral within the complex healthcare environment. Students will explore leadership concepts at the personal, organizational, and staff levels and perform self-assessments. Throughout the course, students will explore contemporary hot topics that influence and are influenced by organization behavior. The students will identify emerging issues and the use of innovation and interprofessional relationships to meet ongoing challenges in the healthcare organizational environment. Pre/corequisite: NR.110.605

NR.110.619. Health Care Economics for Management and Practice. 2 Credits.

This course introduces students to economic concepts and applications in health and health care. Fundamental concepts in health economics are presented and then examined using applications drawn from diverse health care delivery settings and from public health practice. Core topics discussed include the economics of health care delivery organizations, workload measurement using relative value units, using cost-effectiveness and cost-benefit analysis to assess value, the incentive effects of health care payment systems, the economics of prevention services, and the economics of novel health care delivery technologies. Using data and information drawn from contemporary topics in public health and health reform, students will learn key terminology and analytical skills necessary for quantifying health care delivery cost and value. Prerequisite: NR.210.606

NR.110.622. Breastfeeding: Practice and Research. 2 - 3 Credits.

The focus of this course will be on the practice of breastfeeding in relation to culture, the evidence base for practice, the clinical techniques used to support successful breastfeeding, and the role of the nurse in the breastfeeding process. Strategies to encourage the initiation and duration of breastfeeding will be presented. Limited enrollment. Prerequisite: NR.120.520

Prerequisite(s): NR.120.520 is a prerequisite for this course.

NR.110.629. Intermediate Spanish for Health Professionals. 2 Credits.

This course is designed to provide students with the specific medical vocabulary and terminology necessary to communicate with and help treat Latino patients with limited English proficiency. The course will include specific vocabulary groups relating to assessment and care of patients, vocabulary to establish rapport, and discussions leading to cultural competencies. The course will use pre-designed dialogues to review and learn vocabulary and grammar structures, as well as a workshop settings designed to put students into scenarios where they can use both their speaking and listening skills. Most of the course will be taught in Spanish and because this is an Intermediate course, students will be expected to have taken Spanish and retained basic conversational abilities. This course will also include a substantial online component. There will be a placement examination on the first night of class. Pre-Requisites: Functional fluency in the target language. ACTFL Proficiency = Intermediate Mid: Speakers at the Intermediate-Mid level are able to handle successfully a variety of uncomplicated communicative tasks in straightforward social situations. Conversation is generally limited to those predictable and concrete exchanges necessary for survival in the target culture; these include personal information covering self, family, home, daily activities, interests and personal preferences, as well as physical and social needs, such as food, shopping, travel and lodging. Intermediate-Mid speakers tend to function reactively, for example, by responding to direct questions or requests for information. However, they are capable of asking a variety of questions when necessary to obtain simple information to satisfy basic needs, such as directions, prices and services. When called on to perform functions or handle topics at the Advanced level, they provide some information but have difficulty linking ideas, manipulating time and aspect, and using communicative strategies, such as circumlocution. Limited enrollment.

NR.110.630. Beginning Spanish for Health Professionals. 2 Credits. Students enrolled in this class will begin by learning basic Spanish language structure and vocabulary and building appropriate phrasing and vocabulary to facilitate intake of basic information. Focus will be placed on broad vocabulary acquisition as well as specific medical terminology. As a result, extensive memorization will be required for successful participation. Cultural competency concerns will also be discussed. Select students may be able to continue to Advanced Beginning, assuming appropriate focus and effort are dedicated to this course. There will be a placement examination on the first night of class. Pre-Requisites: Very little to NO prior study or experience with the target language. ACTFL Proficiency = Novice Low: Speakers at the Novice-Low level have no real functional ability and, because of their pronunciation, they may be unintelligible. Given adequate time and familiar cues, they may be able to exchange greetings, give their identity, and name a number of familiar objects from their immediate environment. Limited enrollment.

NR.110.631. Health Emergencies in Large Populations. 3 Credits. This intensive course will create an understanding of the public health needs of populations caught up in disaster and conflict. This includes the background, underlying causes, and the dynamics which cause populations to be vulnerable in emergencies. Conceptually, students will understand the link between disaster and development, and how development programs reduce risks for vulnerable populations. Students will be equipped with basic skills to allow them to respond to the public health needs of populations in emergency situations. These include areas of planning, epidemiological assessment, control of communicable disease, information and surveillance systems, environmental sanitation methods, and meeting nutrition requirements in refugee situations. The course will provide an understanding of some other major refugee issues including protection of populations at risk, building human security and meeting mental health needs of affected populations. Through course work and course materials the important link between human rights, human security, and the more technical aspects of responses will be emphasized.

NR.110.634. Nursing in Disasters, Mass Casualty Events & Public Health Emergencies. 3 Credits. This course will provide students with the knowledge, skills and a heightened awareness preparedness and response strategies for disasters, mass casualty events (MCEs) and large scale public health emergencies. Course content and activities focus on understanding the core concepts in critical event mass casualty and disaster management. Course content is designed to assist students in developing initial competence in disaster and mass casualty nursing based upon the International Council of Nurses (ICN) competencies for Disaster Nursing and the Centers for Disease Control and Prevention (CDC) competencies for Public Health Emergency Preparedness.

NR.110.638. Curriculum Theory & Design. 3 Credits. This course focuses on the underlying philosophic and theoretical foundations that inform academic curriculum design and practice. The underlying competing philosophical and practical perspectives of curriculum design are full of contradictions, challenges, uncertainties and directions. Course participants will critically analyze these frameworks and perspectives as background for critiquing and designing academic nursing curricula and courses. This course is about what we teach, why we teach, who we teach, how we teach, and the ever-changing context in which we teach. Attempts to 'revolutionize' nursing curricula in the 1990's did not happen. Course participants will be challenged to think critically about ways to transform and revitalize nursing curricula.

NR.110.639. Advanced Beginner Spanish for Health Professionals. 2 Credits. This course is designed to re-awaken previous language study and provide a forum for development of both additional basic language skills and specific medical terminology. The course will include acquisition of frequently used vocabulary, basic grammar concepts, elementary conversational vocabulary, and colloquialisms. It will include specific vocabulary groups relating to the basic assessment and care of patients. Students will be provided with opportunities to experience the five major areas of language learning: Speaking, Listening, Reading, Writing and Culture. The major focus will be on Speaking and Listening with Reading and Writing providing concrete practice outside of the classroom. There will be a placement examination on the first night of class. Pre-Requisites: Some study or experience with the target language. ACTFL Proficiency = Novice Mid to Novice High: They are able to manage successfully a number of uncomplicated communicative tasks in straightforward social situations. Conversation is restricted to a few of the predictable topics necessary for survival in the target language culture, such as basic personal information, basic objects and a limited number of activities, preferences and immediate needs. Respond to simple, direct questions or requests for information; they are able to ask only a very few formulaic questions when asked to do so. Limited enrollment.

NR.110.640. Advanced Spanish Topics for Health Personnel. 1 Credit. This class will give students already fluent in Spanish the opportunity to practice their general as well as medical Spanish abilities in an atmosphere of Socratic discussion and active exchange of ideas based on weekly reading assignments. Topics discussed include but are not limited to: linguistic, cultural and ethical concerns of interpreters in a medical setting, legal and social responsibilities of interpreters in a medical setting, and review of current standards for interpreting (California and Massachusetts). Limited enrollment. Prerequisite: NR.110.429 Intermediate Spanish (B or better) or permission of instructor.

NR.110.641. Online Teaching and Learning: Development and Instruction. 3 Credits. The purpose of this course is to provide the learner with necessary knowledge and tools to develop and teach in an online course platform. Key design features when developing an online course will be examined in addition to the best practices and evidence-based benchmarks for online teaching and learning. Teaching strategies and guidelines for the educator to use in his/her own instructional setting will be reviewed.

NR.110.645. Pediatric Acute Care I. 3 Credits. This course provides advanced knowledge of common complex acute, critical and chronic conditions to prepare the student to provide restorative care for the pediatric patient. Content addresses comprehensive diagnosis, evaluation and management of complex acute, critical and chronic health problems along with principles of diagnostic and treatment modalities. The student will have the opportunity to demonstrate beginning competency in simulation. Includes 16 hours of onsite simulation immersion.

NR.110.646. Pediatric Acute Care II. 2 Credits. This course emphasizes competence and integration of assessment, critical thinking and evidence based practice to develop differential diagnoses and management plans for complex pediatric acute, critical and chronic care conditions. Prerequisite: NR.110.645
Prerequisite(s): NR.110.645 is a prerequisite for this course.

NR.110.647. Pediatric Acute Care III. 1 Credit.

This course emphasizes the integration of assessment, critical thinking and evidence based practice to develop differential diagnoses and management plans for complex pediatric acute, critical, and chronic conditions. It integrates the scientific, quality and independent practice competencies of the pediatric acute care nurse practitioner with an emphasis on leadership competencies. Prerequisite: NR.110.646

Prerequisite(s): NR.110.646 is a prerequisite for this course.

NR.110.648. Pediatric Acute Care Practicum. 1 - 4 Credits.

This course fosters clinical competence and emphasizes the integration of assessment, critical thinking and evidence based practice to develop differential diagnoses and management plans for high acuity and complex pediatric acute, critical and chronic care conditions.

Management of complex acute, critical and chronic health conditions will be accomplished through clinical experiences under the direction of faculty and clinical preceptors. Clinical placements may include a variety of acute and chronic care settings including, but not limited to intensive care units, inpatient units, emergency departments, intermediate care settings, specialty care settings, etc. This course is repeatable and the credit allocation will be determined individually by a gap analysis.* (56 to 224 clinical hours*) Corequisite: NR.110.645, 110.646 or 110.647

NR.110.649. Advanced Pediatric Acute Care Topics and Roles. 1 Credit.

This course emphasizes the integration of assessment, critical thinking and evidence based practice to develop differential diagnoses and management plans for complex pediatric acute, critical, and chronic conditions. It integrates the scientific, quality and independent practice competencies of the pediatric acute care nurse practitioner with an emphasis on leadership competencies.

NR.110.650. Sexual Health Disparities. 2 Credits.

This course introduces students to sexual health disparities in the United States. Topics include social, epidemiologic, and behavioral determinants of HIV and sexually transmitted infections (STIs), along with disparities related to various forms of violence and trauma. This course explores disparities in healthcare access and utilization among racial/ethnic and sexual minority populations, low-income persons, and immigrants. Through the exploration of health theories, research, and clinical outcomes, students will apply course concepts to nursing practice and science.

NR.110.651. Leadership Role Identity and Career Development. 2 Credits.

This course examines selected principles of personal and professional growth and development necessary for envisioning and constructing an impactful leadership career trajectory. Emphasis is on values formation, particularly leading and managing oneself as core behavioral skills for a successful nursing leadership career in various healthcare organizations and contexts.

NR.110.652. Leadership and Organizational Culture: Theories & Practice in Contemporary Healthcare. 3 Credits.

Students in this course will acquire essential knowledge and skills that typify nursing leadership effectiveness in various levels of healthcare organizations (e.g., micro, meso, and macrosystem levels). Appraisals of contemporary leadership, management, and organizational culture theories, and how these shape and influence students' leadership behaviors are emphasized. Further emphasis is on the application of theory-based and empirically supported leadership practices as a grounding framework for a successful and impactful leadership career. Managerial concepts and activities are integrated into this course.

NR.110.653. Leadership: Organizational Dynamics, Complexities, and Change. 3 Credits.

Students in this course will examine organizational culture and dynamics within the context of healthcare delivery systems. Students are provided with the essential knowledge and skills for leading, managing change, and uncertainties in the evolving and complex healthcare environment. Real-world applications of organizations and systems theories, models, research, and best practices are embedded in this course. Pre and Corequisites: NR 110.652 and NR 110.656

NR.110.654. Foundations of Healthcare Quality and Safety. 2 Credits.

This course provides students with essential content on quality and safety to enable the development of competencies applied to their healthcare leadership roles. Topics reflect the healthcare delivery systems shift to business models (e.g., value-based care) designed to reward safe and quality care outcomes as well as cost-effective care; nurse leaders are increasingly expected to play a central role in supporting this shift. Topics also include translation of the best evidence to the development and implementation of interventions for enhanced quality and safety in practice. Performance improvement strategies and methods will be embedded throughout the course, given their essential role in the healthcare environment of quality and safety. Pre and Corequisite: NR 210.606

NR.110.655. Healthcare Organizational Leadership Practicum I. 2 Credits.

This is the first of the three sequential leadership practicum courses in the Healthcare Organizational Leadership (HOL) Track. The focus of this practicum is to socialize the students into leadership roles within the microsystem level of an organization such as patient care units, primary care clinics, urgent care centers, insurance companies, and healthcare agencies. Practicum sites include direct or indirect care settings supporting the essential role competencies of leaders in a microsystem level of various healthcare organizations. Pre and Corequisites: NR 110.651, NR 110.652 and NR 210.607

NR.110.656. Healthcare Organizational Leadership Practicum II. 3 Credits.

This is the second of the three sequential leadership practicum courses in the Healthcare Organizational Leadership (HOL) Track. Building on the competencies acquired in HOL practicum I, students are socialized into nursing leadership roles at the mesosystem level of an organization such as departments of a hospital, long-term care facilities, and community healthcare facilities. Students will acquire essential role competencies of a director at a mesosystem level such as directors of critical-care, cardiovascular service line, emergency department, quality patient safety, and nursing education standards. The development of a financial acumen for leadership and completion of healthcare safety and/or quality project are critical practice components of this course. Pre and Corequisite: NR 110.654, NR 110.655 and NR 210.806

NR.110.657. Healthcare Organizational Leadership Practicum III. 4 Credits.

This final leadership practicum in the Healthcare Organizational Leadership (HOL) Track facilitates the synthesis of the students' knowledge, skills, and values developed in the previous theoretical and practical leadership and management courses. This practicum emphasizes the application of leadership role competencies at the macrosystem level of a healthcare organization. Aligned with their leadership career goals, students will design the practicum experience and select a meaningful project that has a potential impact on the organizational practice site where they are based or one which they endeavor to lead. Pre and Corequisites: NR 110.619, NR 110.656 and NR 110.653

NR.110.664. Health Care Economics for Management and Practice. 2 Credits.

This course introduces students to economic concepts and applications in health and health care. Fundamental concepts in health economics are presented and then examined using applications drawn from diverse health care delivery settings and from public health practice. Core topics discussed include the economics of health care delivery organizations, workload measurement using relative value units, using cost-effectiveness and cost-benefit analysis to assess value, the incentive effects of health care payment systems, the economics of prevention services, and the economics of novel health care delivery technologies. Using data and information drawn from contemporary topics in public health and health reform, students will learn key terminology and analytical skills necessary for quantifying health care delivery cost and value.

NR.110.730. Evaluation: From Individual to Program. 3 Credits.

The principles guiding evaluation in nursing academia will be examined. Emphasis will be placed on the role of administrators, faculty, students and communities of interest in the evaluation process. Methods, techniques, and strategies used to conduct assessment of individual student performance in a variety of settings and evaluation of overall program effectiveness will be analyzed. Aspects of faculty evaluation will also be explored, as they relate to appointment, promotion, and tenure. Accreditation standards from the Commission on Collegiate Education in Nursing, the National League for Nursing Accreditation Commission, and selected nursing specialty organizations will be discussed.

NR.110.800. Philosophical Perspectives in Health. 3 Credits.

This course draws from and integrates the literatures of nursing theory and science studies (specifically philosophy of science, sociology of science and history of nursing science) to provide a comprehensive understanding of the nature of nursing science and the knowledge it provides. It examines the history of interaction between nursing theory and philosophy of science, with particular emphasis on the place both have played in the process of legitimating nursing science as an academic research discipline. It provides a basic exposure to the social structure of scientific disciplines and how that structure affects the nature of nursing knowledge and results in methodological plurality.

NR.110.809. Quantitative Research Design and Methods. 3 Credits.

This course will provide an in-depth exploration of the design and conduct of research in the health sciences. Students will evaluate common quantitative research designs, sources of bias and how to minimize bias in all steps of the research process across designs, and assess major concepts and principles relevant to research design and analytical approaches. Students will learn the strengths and weaknesses as well as when and how to use these designs and methods by studying and critiquing relevant examples from the literature and ongoing research by faculty. Special issues in the analysis and interpretation of data from various research designs and the critical evaluation of measurement techniques will be addressed. Discussions will also cover the ways in which the nursing perspective shapes the conduct and results of research.

NR.110.810. Theory & Concepts of Health Behavior and Health Promotion. 3 Credits.

This course focuses on the theoretical foundations of health behavior and health promotion as a basis for nursing research. The theory and principles of how health behavior patterns of individuals, families and communities are acquired, maintained and changed are emphasized. The influence of social and psychological factors such as ethnicity, socioeconomic status, gender and social support is included. Selected research applications of theories and models of health promotion are analyzed and relevant research methodologies discussed.

NR.110.814. Scientific Perspectives in Nursing. 3 Credits.

This seminar is a synthesis of concepts of philosophy, theory, and research used in the development and testing of nursing knowledge. Concept analysis and construction, theory development and the relationships among conceptual frameworks, theories, and empirical referents are critically analyzed. The course considers nursing and related sciences with regard to the theories and research and teaches critical evaluation from the perspective of the contemporary philosophy of science and research methodology. Students are guided to consider the philosophic assumptions upon which specific theories are based and how the nature of the research problem and theory guides the choice of research method. They are also guided in the process of a critical review and synthesis of nursing and other knowledge in their own area of concentration and in the identification of key concepts and relationships for their own planned research. Prerequisite: NR 110.800

NR.110.815. Qualitative Research Designs and Methods. 2 Credits.

This course will provide an in depth exploration of qualitative designs to address research questions relevant to the health sciences. Focus will be on the assumptions underlying qualitative approaches, appropriate uses of qualitative designs, strategies for managing and analyzing qualitative data, and critically analyzing the quality and rigor of qualitative studies. Prerequisite: NR.110.800

NR.110.816. Mixed Methods Research Designs. 2 Credits.

This course will provide an in depth exploration of mixed method designs that combine qualitative and quantitative data to address complex research questions relevant to the health sciences. Focus will be on the assumptions underlying mixed methods approaches, appropriate uses of mixed methods designs, strategies for integrating qualitative data with quantitative data in meaningful ways, and critically analyzing the quality and rigor of mixed methods studies. Pre/corequisites: NR.110.800, 110.809; 110.815, PH.140.621 and 622 or equivalents

NR.110.818. Special Topics in Violence Research. 1 Credit.

This seminar examines current topics and issues on violence prevention, intervention and policy research using an interdisciplinary perspective. It will include faculty from the Schools of Nursing, Medicine and Public Health at Johns Hopkins and other leading experts on violence research. Topics will include the physical and psychosocial factors in the perpetration of violence, physical and mental health effects of family and stranger violence, complex interrelationships of substance abuse and violence and the efficacy of health care individual and system interventions. Community level violence policy, prevention, interventions, and health care access for violence related health effects will also be examined. Research design, cultural factors, interdisciplinary collaboration and bioethical issues specific to violence research will be examined. Topics will span two years and the course may be taken up to four times. Pre/corequisite: Doctoral or Post-Doctoral student, or permission of instructor, or any JHU graduate student interested in violence research

NR.110.824. Stress and Stress Response. 2 Credits.

This seminar is a synthesis of concepts of philosophy, theory, and design used in the development and testing of knowledge regarding the phenomenon of stress, responses to stress, and interventions to ameliorate stress. Multiple dimensions of these phenomena are to be considered, including spiritual, psychological, biological, behavioral, social and environmental. Factors and units of analysis encompass the individual, family and community.

NR.110.827. Grant Writing. 1 Credit.

This seminar course provides a foundation upon which to build skills for writing grant applications from seeking appropriate mechanisms for accomplishing the dissertation through the completion of the application. Included in this continuum is the articulation of the background and significance, methods, plans for analysis, and discussion regarding human subjects or vertebrate animals. In applicable cases, the National Research Service Award (NSRA) mechanism is to be the focus. Prerequisites: NR.110.809 and NR.110.815

NR.110.828. Measurement in Health Care Research. 2 Credits.

This course presents both qualitative and quantitative approaches to analyze reliability, validity, and sensitivity of measurements in the health research field. Selected measurement theories and models of health research will be discussed. Classic measurement theories and principles of psychometrics, including reliability and validity, and latent variable-based measurement models, including exploratory factor analysis will be discussed and employed in evaluating data for instrument reliability, validity and sensitivity. This course is designed for doctoral students in nursing, public health and medicine.

NR.110.832. Writing for Publication. 1 Credit.

This course is designed to introduce students to issues relevant to scholarly scientific writing and the publication process. Seminar topics will include factors to be considered in selecting a journal, authorship guidelines, challenges to successful writing (writer's block, procrastination, time management), scientific impact factor, reference managing software, literature searches and scientific documentation, steps in critiquing one's own and others' writing. This course provides opportunities to students to revise and prepare a paper to the point of submitting it for publication to an appropriate professional journal. Permission of the instructor is required for students not enrolled in a doctoral program at the Johns Hopkins University School of Nursing.

NR.110.835. Current Issues and Trends in Cardiovascular Health Promotion Research. 1 Credit.

In this seminar, students examine current issues and trends in cardiovascular health promotion research. Topics reflect the current state of the science and include utilization of Big Data science approaches to address research questions. Research concepts regarding risk factors, screening approaches, and risk reduction, with impact on specific health parameters, are explored. Implications for primordial, primary and secondary prevention strategies for cardiovascular risk management delivered at the public health, community, and provider level are examined. Selected research applications of cardiovascular health promotion interventions are analyzed and research methodologies are critiqued.

NR.110.840. Clinical Research Residency I. 1 Credit.

This seminar and clinical course is required for students in the DNP/PhD and DNP to PhD program and is available for elective credit for any PhD student considering a clinically focused dissertation topic and design methods associated with optimized control conditions. Corequisite: NR.110.827

NR.110.887. Nurse Faculty for the Future Education & Leadership I. 3 Credits.

This is the first of three courses designed to prepare doctoral students for an academic faculty role that focuses on the leadership and educator knowledge and skills required for transition to a new nurse faculty of the future role. This course will focus on teaching philosophies, curriculum development and evaluation, effective and innovative teaching methods and technologies, interprofessional education/practice, and nurse faculty roles. This course uses a hybrid learning approach of online and immersive seminar learning. Prerequisite: Enrolled in the Nurse Faculty for the Future program or per instructor permission

NR.110.888. Nurse Faculty for the Future Teaching Practicum I. 2 Credits.

This practicum experience will be individualized to provide the student with opportunities to develop within the role of a nurse educator. Essential skills include leadership, collaboration, and mentoring. Students are expected to integrate knowledge of teaching and learning theory and methods, advanced communication and situational assessment skills, evidence based practice, and principles of classroom instruction as components of teaching in a didactic course to facilitate the learning of pre-licensure or post-graduate nursing students. Prerequisite: NR.110.887

NR.110.889. Nurse Faculty for the Future Education & Leadership II. 3 Credits.

This is the second of three courses designed to prepare doctoral students for an academic faculty role that focuses on the leadership and educator knowledge and skills required for transition to a new nurse faculty of the future role. This course will focus on effective and innovative online teaching methods and technologies, interprofessional education/practice, and nurse faculty roles. This course uses a hybrid learning approach of online and immersive seminar learning. Prerequisite: NR.110.887

NR.110.890. Dissertation Seminar. 1 Credit.

This seminar provides a means by which progressing PhD students can gather to present and critique each other regarding progress through their dissertation, have a forum for problem-solving and solution-sharing, and to remain up to date regarding regulations in health care and research, and career development.

NR.110.891. Responsibilities & Activities of the Nurse Scientist. 2 Credits.

This seminar addresses the responsibilities and activities of a scientist in the health professions, including ethical issues; the responsible conduct of research; scientific freedom and social responsibility; collaboration and negotiation; interdisciplinary research; peer review; development of a program of research and research career; research funding; and dissemination of research findings through presentations and publications. Prerequisite: NR 110.800, NR.110.814, and NR.110.827 or permission of instructor

NR.110.892. Nurse Faculty for the Future Teaching Practicum II. 2 Credits.

This practicum experience will be individualized to provide the student with opportunities to develop within the role of a nurse educator. Essential skills include leadership, collaboration, and mentoring. Students are expected to integrate knowledge of online teaching and learning theory and methods, advanced communication and situational assessment skills, evidence based practice, and principles of online instruction as components of teaching in an online course and facilitate interprofessional education to promote the learning of pre-licensure or post-graduate nursing students. Prerequisites: NR.110.887 and 110.889

NR.110.893. Nurse Faculty for the Future Leadership Practicum. 2 Credits.

This practicum experience will be individualized to provide the student with opportunities to develop leadership skills within the role of nursing faculty. Essential skills include self-reflection, collaboration, and management. Students are expected to integrate knowledge of leadership theory and methods, advanced communication and situational assessment skills, evidence based practice, and cultural competence to promote transition to a new nurse faculty of the future role. This course uses a hybrid learning approach of online and immersive seminar learning. Prerequisites: NR.110.887, 110.888, 110.889, and 110.892

NR.110.898. Independent Study. 1 - 3 Credits.

Scholarly activity under guidance of faculty serves to help students achieve professional goals. This course may be taken as elective credit.

NR.110.899. Dissertation. 1 - 2 Credits.

Course description available in doctoral program office.

NR.120.501. Professionalism for Nursing in Health Care. 3 Credits.

This course focuses on professional role development in nursing and health care. Content is organized into seven modules: 1) Local to global health care; 2) Ethics; 3) Interprofessional education; 4) Leadership principles; 5) Health care delivery system; 6) Quality and safety; 7) Professional roles in nursing. The course content will address health disparities, interprofessional communication, teams and teamwork, values, ethics, principles of leadership, and professional roles within both interprofessional and nursing teams. Students will be introduced to healthcare delivery concepts, such as healthcare delivery systems and healthcare policy and financing. Finally, students will develop their nursing practice by acquiring a basic understanding of healthcare competencies through two frameworks, the IOM competencies for health care professionals and the Quality and Safety Education in Nursing (QSEN) competencies. Pre/corequisites: NR.120.502, NR.120.503, NR.120.504, NR.120.505.

NR.120.502. Foundations of Nursing Practice. 3 Credits.

This course addresses the knowledge and skills needed to provide safe and effective care to patients. Students will explore scientific principles related to nursing interventions and will practice psychomotor skills needed to safely and effectively implement those interventions. Knowledge, skills and attitudes based on QSEN competencies, including person centered care, use of evidence based guidelines, quality improvement, safety and informatics will be incorporated into lab practice and Master's Program Outcomes. Pre/corequisites: NR.120.501, NR.120.503, NR.120.504, NR.120.505.

NR.120.503. Health Assessment I. 3 Credits.

This course provides students with the basic skills to complete a comprehensive health assessment including the physical, psychological, and social aspects of health to support person-centered care. Integrated in this assessment is the collection and analysis of data which are essential in planning safe and effective patient care. Lectures are designed to help the students apply their knowledge of health assessment to both primary and acute care settings. Emphasis is placed on gathering reliable and relevant information; recognizing variations of normal findings; and identifying abnormal findings using common health problems as exemplars. Pre/corequisites: NR.120.501, NR.120.502, NR.120.504, NR.120.505

NR.120.504. Pathophysiology I. 3 Credits.

This course presents basic knowledge of the interrelationship between normal physiology and pathophysiology across the lifespan as applicable to current nursing practice. Selected major health problems are explored, including clinical manifestations and the pathophysiology. Weekly lecture/discussions are organized based on systems and cover topics from the cellular to major organ systems. Clinical courses will provide a clinical opportunity to apply this content. Pre/corequisites: NR.120.501, NR.120.502, NR.120.503, NR.120.505.

NR.120.505. Integrated Clinical Management: Common Health Alterations. 4 Credits.

This combined clinical and theory course introduces nursing basic concepts and frameworks (communication, safety, organization and nursing process). Additionally, this course will also introduce common conditions found in healthcare. Students practice competencies in communication, assessment, nursing interventions, and documentation in a variety of basic acute care clinical settings. Simulation is incorporated as an adjunct to the clinical experience. 112 clinical hours Pre/corequisites: NR.120.501, NR.120.502, NR.120.503, NR.120.504

NR.120.507. Pharmacology. 3 Credits.

The theoretical course, Pharmacology, provides nurses in general practice with an understanding of core drug knowledge including pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications and precautions, adverse effects, and drug interactions. Sources of individual variation in drug response are presented in relation to drug therapy, and include: health status, lifespan and gender, lifestyle, diet, and habits, environment, and culture and inherited traits. Major drug classifications and prototype drugs are presented in a standardized format that includes discussion of pharmacology principles, medication safety issues, nursing implication of drug therapy, as well as, review in relation to patient case scenarios. The nursing process, which is essential for the nursing management of drug therapy, is emphasized, allowing students to apply their critical thinking skills for patients receiving drug therapy. Nursing management in drug therapy includes maximizing therapeutic effects, minimizing adverse effects, and patient and family education. The course content provides nurses in general practice with the knowledge to apply the foundation of basic pharmacology, with an emphasis on an inter-professional approach to practice. Application of this knowledge in the clinical setting allows nurses in general practice the ability to provide safe, effective nursing care using a holistic approach to improve patient and system outcomes. Prerequisites: NR.120.501-120.505

NR.120.509. Promoting Health in Older Adults. 3 Credits.

This course is designed to promote understanding of the aging process and the role of the nurse with implications for promoting healthy aging and providing care across a continuum of care settings. Students will learn about U.S. and global demographic aging trends as well as other factors impacting physical, psychological, social, and spiritual well-being of individuals, families, and populations. Class discussions will include age-related changes and nursing strategies for promoting health, screening, and providing evidence-based care for older adults with complex co-morbidities, polypharmacy, and major geriatric syndromes, while managing health outcomes in various care settings and across transitions of care; economic and policy implications of health care provided by interprofessional teams for older adults; as well as national/international models of care. Learning application activities are designed to enhance student critical thinking in providing care and promoting health and independence in older adults. Prerequisites: NR.120.501-505

NR.120.511. Integrated Clinical Management: Chronic Health Alterations. 4 Credits.

This course focuses on chronic health alterations which impact individuals, families, and the communities within which they reside. Students will use the nursing process to provide comprehensive care to individuals with chronic health alterations in the acute care setting. Students will also use beginning skills to provide education to individuals and families in consideration of the provision of care across diverse health care settings. 112 clinical hours. Prerequisites: NR.120.501-120.505. Corequisite: NR.120.507.

NR.120.513. Leadership for Professional Nursing. 3 Credits.

This course focuses on concepts central to the development of the beginning leadership role within the interprofessional team in the health care delivery system. Students will review key elements of management and leadership theory and roles, and will examine strategies and processes that address professionalism; improvement of care delivery; facilitation of change; quality and safety; principles of patient-centered care; evidence-based practice; decision making and problem solving; legal and ethical issues; and use of information technologies. Opportunities to apply knowledge to clinical case studies will be a major course focus. Prerequisites: NR.120.501-120.511

NR.120.515. Psychiatric Mental Health. 3 Credits.

This course focuses on the application of the standards of psychiatric mental health nursing in promoting health and caring for health care consumers (defined as individuals, groups, and populations) with alterations in mental health. The major mental disorders are examined relative to etiology, clinical manifestations, and approaches to treatment, and considering variations among individuals and populations. Theories and principles underlying the provision of evidence-based patient-centered care are addressed. The human and economic impacts of mental disorders on the individual, family, and society are examined relative to ethical and legal considerations, health policy and health care financing. CLINICAL DESCRIPTION: Student clinical experiences are in acute care and community settings working in collaboration with the healthcare team. Students will have an opportunity to conduct comprehensive patient assessments, plan and implement care, and develop skills in therapeutic communication with patients, families, and groups. 112 clinical hours Prerequisites: NR.120.501-120.511

NR.120.516. Integrated Clinical Management: Complex Health Alterations. 4 Credits.

This course focuses on individuals and groups of clients experiencing complex medical surgical problems requiring therapeutic and restorative care in acute care settings. Students will collaborate with members of interdisciplinary health care teams in planning, implementing, and evaluating care to adults with complex needs in acute care settings. Students will demonstrate competence in providing safe and high quality nursing care to patients (families) with complex health problems in collaboration with other members of the health care team. 112 clinical hours. Prerequisites: NR.120.501-NR.120.511

NR.120.519. Population Health Leadership. 2 Credits.

This course provides a comprehensive foundation in the essentials of population health management. In this context, population health is a proactive, organized, and cost effective approach to health care that considers the distribution of health outcomes within a population, the health determinants that influence distribution of care, and the policies and interventions that impact the determinants. The ultimate goal of population health is reduced morbidity and improved health status, health service utilization, and personal productivity of individuals in defined populations. The course will focus on an interprofessional team approach to transform health systems for accountable care. Content will be organized around the four pillars of population health: chronic care management, quality and safety, health policy (including financing), and public health. In this course we will examine how health care delivery systems, public health agencies, community-based organizations, and other entities work together to develop and implement interventions to improve the health outcomes of local, national, and global communities. Prerequisites: NR.120.513, 210.606, 210.608

NR.120.520. Nursing the Childbearing Family. 4 Credits.

In this course, students build on and further develop assessment, care-planning, communication, and leadership skills in the context of caring for childbearing families. The focal learning context is the inpatient labor and delivery and postpartum settings, however the course addresses related issues such as family planning and abortion care. All topics are considered in the context of the Universal Rights of Respectful Maternity Care. Students have the opportunity to examine the gap between evidence-based and current obstetric and neonatal nursing care norms and explore strategies for translation of evidence and effective inter-professional team communication. This course raises questions about and opportunities to impact issues of quality and safety, ethical practice, patient advocacy, and social determinants of health. Students are encouraged to put discussions into a broader social and geographic context and appreciate how these challenges and potential solutions vary across settings. 112 clinical hours. Prerequisites: NR.120.501-120.516

NR.120.521. Child Health. 4 Credits.

In this course, the student will study the unique health and developmental needs of infants, children, and adolescents. The course is designed to develop perspectives on wellness and illness in children, emphasizing family-centered care that incorporates screening, teaching, and health counseling. There is a strong developmental and health promotion focus across settings. The course incorporates principles involved in assessment, planning and implementation of nursing interventions appropriate for children with various complex health problems. Health issues specific to children and health issues expressed in unique ways in children will be emphasized. Integration of child health care knowledge and clinical application of this knowledge is a requirement of this course. 112 clinical hours. Prerequisites: NR.120.501-NR.120.516

NR.120.522. Public Health. 3 Credits.

This course provides students with an understanding of the relationship between public health and nursing practice. The course covers key aspects of public health science including epidemiology, social behavioral sciences, and environmental health. The student will have the opportunity to explore the application of public health science to real life health issues at the population level including evidenced-based approaches for optimizing the health of populations/communities. The content of the course provides the foundation for meeting the public health competencies for the generalist nurse with an emphasis on community assessment, health planning, as well as basic public health competencies such as surveillance, screening, immunization, communication, and outbreak investigation. In addition the student will explore issues related to outcome measurement at the population level and emergency preparedness/disaster management. 112 clinical hours. Prerequisites: NR.120.501-NR.120.516

NR.120.527. Integrated Clinical Management: Synthesis Practicum. 6 Credits.

This final clinical course incorporates both didactic, seminar and clinical experiences. Students will be assigned to one of a variety of types of care settings to complete 224 precepted clinical practice hours under the supervision of course faculty. Emphasis is placed on the synthesis of previous coursework and knowledge as students perform the role of an entry-level professional nurse. Students will develop independence in nursing practice, skill in clinical reasoning, and demonstrate accountability for autonomous professional practice. They will synthesize and apply principles of management theory to their nursing practice and demonstrate entry level skills in nursing leadership. Prerequisites: NR.120.501-120.522

NR.120.529. Population and Public Health Nursing. 4 Credits.

This course focuses on developing public health nursing competencies and constructing knowledge of strategies to improve population health outcomes through public health science and population health management. Competencies are developed through community assessment, and practice in the principles of program development and evaluation to improve population health outcomes. The clinical portion of the course uses a critical service-learning pedagogy. The theory portion draws on the science of public health practice and conceptual frameworks for population health improvement to develop student learning in these areas. Content and approaches to practice are mutually reinforced in the theory and clinical elements. Students are provided an opportunity to explore publicly-available policy and population-level data platforms to inform interventions and to design, implement, and evaluate an agency-focused program at their clinical site. They gain knowledge and experience in navigating health policy frameworks and contributing to their development. Prerequisites: NR 120.513, NR 120.515, NR 120.516, NR 210.608

NR.120.530. Politics & Policy for the Health Care Professional. 1 - 2 Credits.

This course is an overview and an introduction to the political process relevant to health care and for health care professionals. It is intended to prepare health professionals to take active roles in policy development and patient, community, systems, and organizational advocacy. The course will review the steps involved with the political process, and provide students with the basic tools for becoming involved in politics. There will be an emphasis on how to navigate and negotiate political systems. This course will be offered online and include two legislative field trips, one to Washington, D.C. (optional) and the other to a legislative body meeting (mandatory). Students will also be required to interview an expert in health care and politics or health policy, who is a leader in health care and a leader of an organization that takes positions on health care legislation. Limited enrollment.

NR.120.534. Quality Improvement & Safety: Systems Applications I. 1 Credit.

Fuld Fellows complete clinical hours. The hours are divided as follows: 50 hours with an assigned Quality Improvement (QI) or Safety project under the guidance of a project mentor and Fuld course faculty, clinical conference meetings (6 hours) with Fuld Faculty. In order to participate as a member of a clinical Quality or Safety project team, emphasis is placed on the synthesis of coursework and knowledge in quality improvement and safety gained in Foundations of Nursing Practice. Using written and verbal communication, Fellows will further develop teamwork and communication skills and leadership skills through reflection, ongoing self-assessment as a QI or Safety project team member, and evaluation of communication that impedes or enhances effective teams. Students will also reflect on the QI and Safety, teamwork and communication, and leadership in their clinical practice sites in their Fuld Fellowship clinical journals and in class discussion. Prerequisites: NR.120.501-120.505 Corequisites: NR.120.507-120.511

NR.120.535. Quality Improvement & Safety: Systems Applications II. 1 Credit.

In this course, Fuld Fellows complete clinical hours focused on a Quality Improvement (QI) or Safety project under the guidance of a mentor and course faculty. Fellows continue to participate as a member of a clinical QI or Safety project team and emphasis is placed on the synthesis of 120.534 coursework and knowledge in quality and safety. Teamwork, communication, and leadership skills will continue to develop through ongoing self-assessment and evaluation. In addition, this course will feature guest lectures from interprofessional leaders in the field of QI and patient safety. Prerequisite: NR.120.534

NR.120.536. Quality Improvement & Safety: Systems Applications III. 1 Credit.

This course provides realistic and practical approaches for translating Fuld learning in quality and safety into postgraduation clinical work settings. The course will focus on the practice of the culture of safety, teamwork, communication, leadership, and change at the level of the newly graduated registered nurse. Fuld Fellows will reflect on their experiences in their Fuld mentored projects and application of their learning to Quality Improvement challenges in other patient safety domains. Students will synthesize learning from their Master's entry into nursing course work from the previous semesters to devise strategies for improvement in their clinical practice settings. Discussion with classmates and faculty will facilitate leveraging beginning QI strategies into participation in Quality Improvement and safety teams at the unit and institution level. Prerequisite: NR.120.535

NR.120.537. Community Outreach to Underserved Communities in Urban Baltimore. 1 Credit.

This course provides students with an overview of Baltimore's vulnerable communities and underserved populations. Students gain a broad perspective on factors affecting the health of underserved and vulnerable communities in urban Baltimore. Students will develop cultural competency skills to work effectively in partnership with Baltimore communities. The course includes the history of Johns Hopkins nursing and Baltimore's history, a broad definition of health focusing on social determinants of health factors such as poverty, housing, violence, substance abuse, disparities in health and health care, social justice, vulnerable populations, employment, safety, and the environment. Students will also examine the influence of implicit bias on communication and interventions as well as the importance of integration trauma-informed care in urban environments. Selected Baltimore community health interventions are presented with emphasis on health promotion and community organizing. Local community and civic leaders present their roles and discuss current public health issues facing Baltimore. Students will learn about local neighborhoods, community agencies, and resources and gain basic skills in basic community assessment.

NR.120.538. Nursing Research Seminar. 1 Credit.

This course will provide an exploration of the design and conduct of research in the health sciences. Students will be introduced to common research designs through the discussion of ongoing research of faculty. Students will examine current topics and issues in nursing research. Discussions will cover the ways in which the nursing perspective shapes the conduct and results of research. Topical seminars also will incorporate an interdisciplinary perspective. The goal is to engage students in the ongoing research of faculty and promote intellectual growth among highly motivated pre-licensure Master's students who aspire to learn more about nursing research. The course must be taken each semester that the student is participating in the Research Honors Program. Prerequisite: Admission to Research Honors Program

NR.120.539. Community Perspectives on the Childbearing Process. 2 Credits.

This course focuses on developing initial competence in the birth companion role, based on the Doula model. The Doula model emphasizes physical, emotional, and informational support to the mother before, during, and after childbirth. Maternal and child health nursing and community health nursing theories and practices are reinforced. In addition to class time, biweekly meetings are held to discuss birth experiences and case management issues, and to hear presentations from experts in the field, including lactation consultants, social workers, community health educators and child birth educators. Limited enrollment. Course may span more than one term.

NR.120.542. Collaborating for Interprofessional Care: Nursing, Medical, & Pharmacy Students Learning to Work Together and Care for Older Adults. 2 Credits.

This course is designed to promote understanding about the importance of health professions students (nursing, medical, and pharmacy) to work together in providing patient care. Seminar topics include a comparison of the similarities and differences in nursing, medical, and pharmacy education, as well as the importance of interprofessional collaboration for providing safe, high quality patient care. Students will learn about the distinct roles of physicians, nurses, pharmacists and other professional members of the health care team, and will appreciate how these roles contribute to safe care delivery through a variety of learning modalities, including discussions, role play, case studies and home visits. Integrated learning of nursing, medical, and pharmacy students will include strategies focusing on developing skills needed to enhance interprofessional communication, teamwork and collaboration in developing therapeutic relationships with older adults. The Worth and Jane Daniels Initiative supports this course targeting pre-licensure students, as well as a course at the advanced practice level for resident physicians and pharmacy students to learn the skills of interprofessional collaboration while caring for complex community-based older patients. Corequisites: NR.120.501-120.505

NR.120.543. Collaborating for Interprofessional Care: Nursing, Medical, & Pharmacy Students Learning to Work Together and Care for Older Adults II. 2 Credits.

This course is designed to promote interprofessional collaborative strategies for health professional students (nursing, medical, and pharmacy) to implement in working together in providing patient care. Seminars focus on exploring roles of physicians, nurses, pharmacists and other professional members of the health care team. Principles for promoting interprofessional collaboration in providing safe, high quality patient care will be discussed. Students will examine and practice strategies to work effectively on teams and communicate with other health care professionals, such as conflict resolution and effectively interpreting discipline specific jargon when sharing information. A variety of learning modalities will be used, including simulation, role play, case studies and home visits. Nursing, medical, and pharmacy students will examine principles of collaboration to enhance interprofessional communication, teamwork and collaboration in developing therapeutic relationships with older adults. The Worth and Jane Daniels Initiative supports this two-part series courses targeting pre-licensure students, as well as learning at the advanced practice level for nurse practitioner students, resident physicians, and pharmacy students to learn the skills of interprofessional collaboration while caring for complex community-based older patients. Prerequisites: NR.120.501-505, NR.120.542.

NR.120.544. Seminar in Specialty Nursing: Introduction to Emergency Nursing. 3 Credits.

This course is designed to expand the student's learning in a specified topic related to nursing practice. Advanced theories and principles related to the delivery of nursing care in selected settings and/or with selected patient populations are presented as seen in the ED setting. The course builds on the previous coursework throughout the curriculum. In this Specialty Nursing Seminar, students will acquire an overview of the principals involved in the planning and implementation of nursing interventions for patients in Emergency Department (ED) settings. Content will focus on the unique environment of the ED with an emphasis on patient assessment, triage principles, ACLS protocols, Trauma Patient Management, and Disaster Preparedness & Response Principles. Using a systems approach, the students will review the etiologies, clinical presentations, pathophysiology, and nursing interventions for these patients. Prerequisites: NR.120.501-120.522

Prerequisite(s): Prerequisites: All 1st through 4th semester courses.

NR.120.545. Seminar in Specialty Nursing: The Nurse's Role in Caring for the Childbearing Family and Newborns. 3 Credits.

This course is designed to expand the student's learning in the childbearing family and newborn care. This course will introduce students to theory and its application to practice and research, providing critical in-depth information of 'hot topics' in providing evidence-based care to the childbearing family and newborns. In this nursing specialty seminar, the students will develop a comprehensive understanding of the physiologic, psycho-social, legal, and ethical considerations impacting the nurse's role in caring for the childbearing family and newborns. Students will learn about advanced physiologic principles of genetic screening modalities, including first and second trimester screening and testing for Down's syndrome and open neural tube defects. Students will review physiologic principles underlying screening modalities for fetal well-being during pregnancy and the birth process, including advanced concepts in fetal monitoring. Students will engage in a role play simulation that includes key concepts in quality and safety, including patient advocacy, teamwork and interprofessional communication. Ethical considerations, legal and risk management issues for the nurse in clinical practice will be reviewed. Current practice guidelines from key professional organizations (AWHOHH, ACNM, ACOG, NICHD) will be analyzed from an evidence-based perspective. Neonatal resuscitation will be introduced with practical application. Prerequisites: NR.120.501-120.522

Prerequisite(s): Prerequisites: All 1st through 4th semester courses.

NR.120.546. Seminar in Specialty Nursing: Acute Care of Children. 3 Credits.

This course is designed to expand the student's learning in a specified area related to nursing practice and research. Advanced theories and principles related to the delivery of nursing care in selected settings and/or with selected populations are presented. The student will build on previous pediatric content, gaining more depth in the acute care topics. During the course, students will examine trauma care, pediatric sepsis and shock, congenital heart defects, child life and non-pharmacologic pain intervention, hematology and oncology, pediatric respiratory diseases and support, and student-led topics of interest in pediatric acute care. The students will select the area of nursing practice and research they would like to explore in more depth. The course will conclude with small group evidence-based practice presentations using questions to be researched that may have been stimulated from problems discovered in previous pediatric clinical rotations. Prerequisites: NR.120.501-120.522

Prerequisite(s): Prerequisites: All 1st through 4th semester courses

NR.120.547. Seminar in Specialty Nursing: Introduction to Acute/Critical Care. 3 Credits.

This course is designed to expand the student's learning in a specified topic related to nursing practice. Advanced theories and principles related to the delivery of nursing care in selected settings and/or with selected patient populations are presented. The course builds on the previous coursework throughout the curriculum. Students will acquire an overview of the unique environment of the Acute/Critical Care Unit. The focus will be the principles involved in planning, implementing and evaluating nursing and medical interventions for critical care patients. The students will review the causes, clinical presentations, pathophysiology and hemodynamic changes of patients with respiratory failure, heart failure, intracerebral hemorrhage, renal failure, shock and sepsis. Content will include the medications, advanced monitoring, and equipment used in the critical care setting. Prerequisites: NR.120.501-120.522

Prerequisite(s): Prerequisite: All 1st through 4th semester courses.

NR.120.548. Seminar in Specialty Nursing: Preparing for Global Nursing. 3 Credits.

This course is designed to orient students to global health priorities and nursing's unique position in meeting international, health-related goals. Students will use weekly topical areas of interest to engage with policy and practice issues relevant to nursing in low and middle income countries (LMIC). Students are encouraged to compare and contrast nursing education, policy, and practice across settings and in so doing, better understand the contribution of nursing in LMIC and their own readiness to contribute in international settings. Learning activities are designed to introduce students to global health priorities and influential international nursing, nongovernmental, and governmental organizations. Students will discuss the complex influences on health in LMIC and explore the connectedness between these and their own experience nursing in the US. Assignments are designed to provide opportunities to explore and apply an expanded range of resources and evidence to the nursing process as they address global health problems. Prerequisites: NR.120.501-120.522

Prerequisite(s): Completion of all 1st through 4th term courses

NR.210.600. Advanced Physiology/Pathophysiology. 4 Credits.

This course focuses on principles of physiology and pathophysiology that affect wellness and disease states across the lifespan. The interrelationship between physiology and pathophysiology. Students will apply this knowledge to interpret changes in normal functions that indicate illness and identify principles underlying disease prevention strategies. This course serves as the foundation for clinical reasoning skills used for the advanced practice role.

NR.210.601. Advanced Health Assessment and Measurement. 3 Credits.

This course will build upon health assessment skills developed in the basic nursing educational program. In this course students will attain advanced knowledge and skills in history taking, biopsychosocial and cultural health assessment across the lifespan. The laboratory experiences utilizing a systems approach will focus on assessment of clients and presentation of normal and abnormal findings. Pre or corequisite: NR.210.600

NR.210.602. Clinical Pharmacology. 4 Credits.

This course will build upon basic pharmacology knowledge attained in the professional nurse's education and experience. This advanced course focuses on the clinical use of drugs for clinical conditions most commonly seen in practice and across the lifespan. Principles of rational medication prescribing based on evidenced-based guidelines, pharmacology principles, lifespan considerations, cultural, socioeconomic and legal influences will be presented. Prescription medications will be the focus of the course; however, over-the-counter and complementary and alternative medications will be discussed for certain disease states. Completion of this course will enable students to identify pharmacologic treatments for commonly encountered clinical conditions, as well as, prescribe, manage and evaluate drug therapy.

NR.210.603. Human Growth and Development: Birth through Adolescence. 1 Credit.

This course describes normal and abnormal variations in growth and development from birth through adolescence. An emphasis on appropriate screening, identification, and management of abnormal variations in growth and development will be discussed.

NR.210.604. Health Supervision: Birth through Adolescence. 2 Credits.

Health supervision includes the promotion of a healthy environment through screening, disease and injury prevention, and anticipatory guidance. This course discusses key components of health supervision as well as identification, prevention and management of common health concerns that may be encountered during health maintenance exams in pediatrics. Prerequisite: NR.210.603

Prerequisite(s): NR.210.603 is a prerequisite for this course.

NR.210.605. Diagnostic Skills and Procedures for Advanced Practice Nursing. 2 Credits.

This course provides theoretical knowledge and emphasizes psychomotor skills necessary to provide selected advanced practice nursing interventions utilized in the evaluation and management of patients. This course introduces evaluation, selection, interpretation, and application of diagnostic testing, evaluation techniques and procedures. Evidence-based clinical reasoning and decision-making techniques are presented and applied in simulation lab practices for skills acquisition and demonstration of competency. Prerequisite: NR.210.601

Prerequisite(s): NR.210.601 is a prerequisite for this course.

NR.210.606. Biostatistics for Evidence-Based Practice. 3 Credits.

This course is intended to apply standard statistical methods to develop knowledge and skills, enabling students to understand data collection and analysis methods, interpretation and reporting of statistical results, and critically read and evaluate nursing and the healthcare literature. The emphasis is on understanding the relevance and use of appropriate statistical methods in nursing research. Published nursing research articles in peer reviewed nursing and healthcare journals, and computing lab experiences are used to motivate topics covered in classes. Prerequisite: College level Statistics or Biostatistics course.

NR.210.607. Context of Health Care for Advanced Nursing Practice. 3 Credits.

This three credit course examines the scope and status of professional roles and responsibilities of nurses prepared to assume accountability for quality care outcomes; navigate and integrate care services across the healthcare system; collaborate with and build interprofessional care teams; design innovative nursing practices; and facilitate the translation of evidence into practice. This course focuses on personal leadership and the associated skills and knowledge to practice as a contemporary professional nurse. Course content and activities focus on understanding the forces driving contemporary health care, as well as efficient and effective function in a continuously changing health care environment.

NR.210.608. The Research Process and Its Application to Evidence-Based Practice. 3 Credits.

This course will prepare students for clinical leadership roles in health care through the translation of the best available scientific evidence into nursing practice. Students will develop the requisite critical skills and knowledge to independently search for, review, appraise, and synthesize research literature of particular interest to nursing practice. Students will be prepared to recommend practice changes at the individual- and system-level based on the strength of the evidence. Prerequisite: NR.210.606, 120.508, or 110.507

Prerequisite(s): NR.210.606 is a prerequisite for this course.

NR.210.609. Philosophical, Theoretical & Ethical Basis of Advanced Nursing Practice. 3 Credits.

This course will explore the conceptual, theoretical, and ethical bases of nursing. Selected conceptual models and frameworks of nursing and ethics will be analyzed with emphasis on implications for nursing practice. This course is designed to provide students with frameworks, concepts, and personal and professional exercises for approaching nursing practice issues and to enhance the student's understanding of ethical issues in nursing and in health care and to respond to them specifically.

NR.210.610. Health Promotion and Risk Reduction Across the Lifespan. 2 Credits.

This course introduces the student to current issues, theories, and research in health promotion, disease prevention, and risk reduction related to individuals, families, aggregates, and communities. The role of the nurse in risk assessment, counseling, education, and screening will be emphasized as well as thinking broadly about health promotion needs and health behavior from an ecological perspective.

NR.210.620. Clinical Reasoning I: Common Acute Illnesses in Pediatrics. 2 Credits.

This is the first of five sequential theory courses that will prepare Family Nurse Practitioner (FNP) and/or Pediatric Nurse Practitioner (PNP) students to provide primary care to pediatric patients, especially those experiencing common acute illnesses in one or more body systems. It integrates evidence-based aspects of care that are based on age, gender, sexuality and social determinants of health. Content addresses comprehensive assessment, diagnosis and management of common acute health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up care for pediatric patients. FNP and PNP students focus on health care for the pediatric population with particular emphasis on underserved and those from various cultures, emphasizing health promotion, patient education, and disease prevention. Prerequisites: NR. 210.600, 210.601, 210.602, 210.603, and 210.604 Corequisite: NR.210.605

Prerequisite(s): NR.210.600, 601, and 602 are prerequisites for this course.

NR.210.621. Clinical Reasoning II: Common Chronic Illnesses in Adult/Geriatric Health. 2 Credits.

This is the second of five sequential theory courses that will prepare Family Nurse Practitioner (FNP) students and AGNP Primary Care students to provide primary care for adults and geriatrics, especially in those experiencing common chronic illnesses in one or more body systems. It integrates evidence-based aspects of care that are based on age, gender, sexuality and social determinants of health. Content addresses comprehensive assessment, diagnosis and management of common chronic health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up for patients with common chronic problems. FNP and AGNP Primary Care students focus on health care for all populations and all adult age groups with particular emphasis on underserved and those from various cultures, emphasizing health promotion, patient education, and disease prevention. Prerequisite:

NR.210.620 Corequisite: NR.210.625

Prerequisite(s): NR.210.620 is a prerequisite for this course.

NR.210.622. Clinical Reasoning III: Clinical Management for the Primary Care Nurse Practitioner in Acute Complex Issues from Adolescence to Aging and Issues in Gender Health. 2 Credits.

This is the third of five sequential theory courses that will prepare primary care nurse practitioner students to provide primary care for adolescents, obstetrical patients and their families, and focus on gender health conditions. This course provides didactic content to prepare the primary care nurse practitioner student to provide primary care to adolescents and adults experiencing acute complex problems with an emphasis in obstetrical, gender and behavioral health systems. It integrates evidence-based aspects of care that are based on age, gender, sexuality and social determinants of health. Content addresses comprehensive assessment, diagnosis, and management of acute complex health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients. Primary care nurse practitioner students focus on health care for adolescents, obstetrical, and gender health populations, with particular emphasis on underserved and those from various cultures emphasizing health promotion, patient education, and disease prevention. Prerequisites: NR.210.621 and 210.625 Corequisite: NR.210.626

Prerequisite(s): NR.210.621 and 625 are prerequisites for this course.

NR.210.623. Clinical Reasoning IV: Common Acute and Complex Chronic Illnesses in Primary Care in Adults/Geriatrics. 2 Credits.

This course provides didactic content to prepare the adult/gerontology and family nurse practitioner student to provide primary care to adults and older adults, experiencing common acute and complex chronic illnesses in one or more body systems. It integrates evidence-based biomedical, psychological, social and nursing aspects of care that is based on age, gender, culture, and ethnicity. Content addresses comprehensive diagnosis and management of common acute and complex chronic health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients with common acute and complex chronic problems. Nurse practitioner students focus on health care for all populations and all adult age groups with particular emphasis on underserved and those from various cultures. Students also emphasize health promotion, patient education, and disease prevention, screening of adult and older populations, and providing culturally competent care. Prerequisites: NR.210.622 and 210.626 Corequisite: NR.210.627

Prerequisite(s): NR.210.622 and 626 are prerequisites for this course.

NR.210.624. Clinical Reasoning V: Clinical Management for the Family Nurse Practitioner - Role Transition and Special Topics in Family Health. 2 Credits.

This course provides didactic content to prepare the Family Nurse Practitioner (FNP) student to provide primary care to children and adults throughout the lifespan, experiencing chronic complex health problems with an emphasis on coordination on older populations and selected groups with atypical presentations. It integrates evidence-based aspects of care that are based on age, gender, sexuality and social determinants of health. Content addresses comprehensive assessment, diagnosis, and management of acute complex health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients. FNP students focus on health care for all populations and all age groups with particular emphasis on underserved and those from various cultures emphasizing health promotion, patient education, and disease prevention. Prerequisites: NR.210.623 and 210.627 Corequisite: NR.210.628

Prerequisite(s): NR.210.623 and 627 are prerequisites for this course.

NR.210.625. Clinical Practicum I: Family Nurse Practitioner. 3 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 168 hours of clinical experience in adult, pediatric, women's health or family medicine setting. This first sequential course will prepare students to diagnose, treat, and follow-up patients across the lifespan. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, sexuality, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric and adult healthcare settings.

Prerequisite: NR.210.620 Corequisite: NR.210.621

Prerequisite(s): NR.210.620 is a prerequisite for this course.

NR.210.626. Clinical Practicum II: Family Nurse Practitioner. 3 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 168 hours of clinical experience in adult, pediatric, women's health or family medicine setting. This second sequential clinical course will prepare students to diagnose, treat, and follow-up patients across the lifespan. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, sexuality, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric and adult healthcare settings. Prerequisites: NR.210.621 and 210.625 Corequisite: NR.210.622

Prerequisite(s): NR.210.621 and 625 are prerequisites for this course.

NR.210.627. Clinical Practicum III: Family Nurse Practitioner. 2 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 112 hours of clinical experience in adult, pediatric, women's health or family medicine setting. This third sequential clinical course will prepare students to diagnose, treat, and follow-up patients across the lifespan. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, sexuality, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric and adult healthcare settings. Prerequisites: NR.210.622 and 210.626 Corequisite: NR.210.623

Prerequisite(s): NR.210.622 and 626 are prerequisites for this course.

NR.210.628. Clinical Practicum IV: Family Nurse Practitioner. 2 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 112 hours of clinical experience in adult, pediatric, women's health or family medicine setting. This fourth sequential clinical course will prepare students to diagnose, treat, and follow-up patients across the lifespan. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, sexuality, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric and adult healthcare settings. Prerequisites: NR.210.623 and 210.627 Corequisite: NR.210.624
Prerequisite(s): NR.210.623 and 627 are prerequisites for this course.

NR.210.629. Clinical Practicum V: Family Nurse Practitioner. 4 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 224 hours of clinical experience in adult, pediatric, women's health or family medicine setting. This fifth and final sequential clinical course will prepare students to diagnose, treat, and follow-up patients across the lifespan. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, sexuality, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric and adult healthcare settings. Prerequisites: NR.210.624 and 210.628

Prerequisite(s): NR.210.624 and 628 are prerequisites for this course.

NR.210.630. Clinical Reasoning I - Clinical Management for the Pediatric Nurse Practitioner: Common Acute Illnesses in Pediatrics. 2 Credits.

This is the first of five sequential theory courses that will prepare Pediatric (PNP) students to provide primary care to pediatric patients, especially in those experiencing common acute illnesses in one or more body systems. It integrates evidence-based aspects of care that are based on age, gender, sexuality and social determinants of health. Content addresses comprehensive assessment, diagnosis and management of common acute health conditions, including appropriate diagnostic procedures, laboratory tests, and follow-up care for pediatric patients. PNP students focus on health care for the pediatric population with particular emphasis on underserved and those from various cultures, emphasizing health promotion, patient education, and disease prevention. Prerequisites: NR.210.600, 210.601, 210.602, 210.603, 210.604

Prerequisite(s): NR.210.600, 601, and 602 are prerequisites for this course.

NR.210.631. Clinical Reasoning II-Clinical Management for the Pediatric Nurse Practitioner: Chronic Illnesses in Pediatrics. 2 Credits.

This is the second of five sequential theory courses that will prepare Pediatric Nurse Practitioner (PNP) students to provide primary care to pediatric patients, especially in those experiencing common chronic illnesses in one or more body systems. It integrates evidence-based aspects of care that are based on age, gender, sexuality and social determinants of health. Content addresses comprehensive assessment, diagnosis and management of common chronic health conditions, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients with common chronic conditions. PNP students focus on health care for the pediatric population with particular emphasis on underserved and those from various cultures, emphasizing health promotion, patient education, and disease prevention. Prerequisite:

NR.210.630 Corequisite: NR.210.635

Prerequisite(s): NR.210.630 is a prerequisite for this course.

NR.210.632. Clinical Reasoning III: Acute Complex Problems with Gender and Behavior Health (with variations). 2 Credits.

This is the third of five sequential theory courses that will prepare the Pediatric Nurse Practitioner (PNP) to provide primary care to the pediatric experiencing acute complex health conditions with an emphasis in gender and behavioral health systems. It integrates evidence-based aspects of care that are based on age, gender, sexuality and social determinants of health. Content addresses comprehensive assessment, diagnosis, and management of acute complex health conditions, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients. PNP students focus on health care for all populations and all age groups with particular emphasis on underserved and those from various cultures emphasizing health promotion, patient education, and disease prevention. Prerequisites: NR.210.631 and 210.635 Corequisite: NR.210.636

Prerequisite(s): NR.210.631 and 635 are prerequisites for this course.

NR.210.633. Clinical Reasoning IV-Clinical Management for the Pediatric Nurse Practitioner: Problems Specific to the Newborn/Infant. 2 Credits.

This is the fourth of five sequential theory courses that will prepare Pediatric Nurse Practitioner (PNP) students to provide primary care to clinical conditions that affect newborns and infants in one or more body systems. It integrates evidence-based aspects of care that are based on age, gender, sexuality and social determinants of health. Content addresses comprehensive assessment, diagnosis and management of newborn and infant health conditions, including appropriate diagnostic procedures, laboratory tests, and follow-up care for newborn and infant patients. PNP students focus on health care the newborn and infant with particular emphasis on underserved and those from various cultures, emphasizing health promotion, patient education, and disease prevention. Prerequisite: NR.210.632 and 210.636 Corequisite: NR.210.637

Prerequisite(s): NR.210.632 and 636 are prerequisites for this course.

NR.210.634. Clinical Reasoning V - Topics for Pediatric Nurse Practitioner Practice. 2 Credits.

This is the final course in a series of five that provides didactic content to prepare the Pediatric Nurse Practitioner (PNP) student to practice as a PNP in the primary care setting. It integrates evidence-based biomedical, psychological, social and nursing aspects of care that is based on age, gender, culture, and ethnicity. The course emphasizes the legal, regulatory, and scope of practice issues and readies the student for entry into practice. Attention is directed towards quality, safety, and risk management monitoring, and nurse practitioner-driven outcomes. The course will also explore patient transitions of care, palliative care decisions, development of expert communication skills in difficult conversations, and practice-delivery models for care. Prerequisites:

NR.210.633 and 210.637 Corequisite: NR. 210.638

Prerequisite(s): NR.210.633 and 637 are prerequisites for this course.

NR.210.635. Clinical Practicum I: Pediatric Nurse Practitioner. 2 - 3 Credits.

This first sequential clinical course will prepare students to diagnose, treat, and follow-up pediatric patients and families. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric healthcare settings. 112 clinical hours. Prerequisite: NR.210.630 Corequisite: NR.210.631

Prerequisite(s): NR.210.630 is a prerequisite for this course.

NR.210.636. Clinical Practicum II: Pediatric Nurse Practitioner. 2 - 3 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 112 hours of clinical experience in a pediatric primary care, newborn nursery, school based health center or pediatric specialty practice. This second sequential clinical course will prepare students to diagnose, treat, and follow-up pediatric patients. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric healthcare settings. Prerequisites: NR.210.631 and 210.635 Corequisite: NR.210.632
Prerequisite(s): NR.210.631 and 635 are prerequisites for this course.

NR.210.637. Clinical Practicum III: Pediatric Nurse Practitioner. 2 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 112 hours of clinical experience in a pediatric primary care, newborn nursery, school based health center or pediatric specialty practice. This third sequential clinical course will prepare students to diagnose, treat, and follow-up pediatric patients. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric healthcare settings. Prerequisites: NR.210.632 and 210.636 Corequisite: NR.210.633
Prerequisite(s): NR.210.632 and 636 are prerequisites for this course.

NR.210.638. Clinical Practicum IV: Pediatric Nurse Practitioner. 2 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 112 hours of clinical experience in a pediatric primary care, newborn nursery, school based health center or pediatric specialty practice. This fourth sequential clinical course will prepare students to diagnose, treat, and follow-up pediatric patients. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric healthcare settings. Prerequisites: NR.210.633 and 210.637 Corequisite: NR.210.634
Prerequisite(s): NR.210.633 and 637 are prerequisites for this course.

NR.210.639. Clinical Practicum V: Pediatric Nurse Practitioner. 4 Credits.

Under the guidance of a clinical faculty instructor and experienced preceptor, the student will participate in 224 hours of clinical experience in a pediatric primary care, newborn nursery, school based health center or pediatric specialty practice. This fifth sequential clinical course will prepare students to diagnose, treat, and follow-up pediatric patients. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of pediatric healthcare settings. Prerequisites: NR.210.634 and 210.638
Prerequisite(s): NR.210.634 and 638 are prerequisites for this course.

NR.210.640. Clinical Reasoning I: Common Acute Illness. 2 Credits.

This course provides content to prepare the adult/gerontology nurse practitioner student to provide primary care to adults, experiencing common acute illnesses in one or more body systems. It integrates evidence-based biomedical, psychological, social and nursing aspects of care that is based on age, gender, culture, and ethnicity. Content addresses comprehensive diagnosis and management of common acute health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients with common acute problems. Nurse practitioner students focus on health care for all populations and all adult age groups with particular emphasis on underserved and those from various cultures. Students also emphasize health promotion, patient education, and disease prevention, screening of adult and older populations, and providing culturally competent care. Prerequisites: NR.210.600, 210.601, and 210.602

Prerequisite(s): NR.210.600, 601 and 602 are prerequisites for this course.

NR.210.641. Clinical Reasoning II: Common Chronic Illnesses in Adult/Geriatric Health. 2 Credits.

This course provides content to prepare the adult/gerontology nurse practitioner student to provide primary care to adults experiencing health problems in one or more body systems. This course prepares students to diagnose, treat and follow-up common chronic illnesses in adults. It integrates evidence-based biomedical, psychological, social and nursing aspects of care that is based on age, gender, culture, and ethnicity. Didactic content addresses comprehensive diagnosis and management of common chronic health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients with common chronic problems. Nurse practitioner students focus on health care for all populations and all adult age groups with particular emphasis on underserved and those from other cultures. Students also emphasize health promotion and disease prevention, screening of adult and older populations, and providing culturally competent care. Prerequisite: NR.210.640 Corequisite: NR.210.645

Prerequisite(s): NR.210.640 is a prerequisite for this course.

NR.210.642. Clinical Reasoning III: Clinical Management for the Primary Care Nurse Practitioner in Acute Complex Issues from Adolescence to Aging and Issues in Gender Health. 2 Credits.

This course provides content to prepare the adult/gerontology nurse practitioner student to provide primary care to adults, including older persons, experiencing health problems in one or more body systems. This course prepares students to diagnose, treat and follow-up acute complex illnesses in adults. It integrates evidence-based biomedical, psychological, social and nursing aspects of care that is based on age, gender, culture, and ethnicity. Didactic content addresses comprehensive diagnosis and management of acute complex health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients with acute complex problems. Nurse practitioner students focus on health care for all populations and all adult age groups with particular emphasis on underserved and those from other cultures. Students also emphasize interdisciplinary practice and referral patterns for optimal patient health. Prerequisites: NR.210.641 and 210.645 Corequisite: NR.210.646

Prerequisite(s): NR.210.641 and 645 are prerequisites for this course.

NR.210.643. Clinical Reasoning IV: Complex Chronic Illness. 2 Credits.

This course provides content to prepare the adult/gerontology nurse practitioner student to provide primary care to adults, including older persons, experiencing health problems in one or more body systems. This course prepares students to diagnose, treat and follow-up complex chronic illnesses in adults. It integrates evidence-based biomedical, psychological, social and nursing aspects of care that is based on age, gender, culture, and ethnicity. Content addresses comprehensive diagnosis and management of complex chronic health problems, including appropriate diagnostic procedures, laboratory tests, and follow-up care for patients with chronic complex problems. Nurse practitioner students focus on health care for all populations and all adult age groups with particular emphasis on underserved and those from other cultures. Students also emphasize health promotion and disease prevention, patient advocacy, screening of adult and older populations, and providing culturally competent care. Prerequisites: NR.210.642 and 210.646 Corequisite: NR.210.647

Prerequisite(s): NR.210.642 and 646 are prerequisites for this course.

NR.210.644. Clinical Reasoning V: Topics for Nurse Practitioner Practice. 2 Credits.

This course provides content to prepare the adult/gerontological nurse practitioner student for transition to a primary care nurse practitioner who cares for adults. It integrates evidence-based biomedical, psychological, social and nursing aspects of care that is based on age, gender, culture, and ethnicity. The course emphasizes care of complex patients and the legal, regulatory, and scope of practice issues and readies the student for entry into practice. Attention is directed towards quality, safety, and risk management monitoring, and nurse practitioner-driven outcomes. The course will also explore patient transitions of care, end of life care decisions, development of expert communication skills in difficult conversations, and practice-delivery models for care. Prerequisites: NR.210.643 and 210.647 Corequisite: NR.210.648

Prerequisite(s): NR.210.643 and 647 are prerequisites for this course.

NR.210.645. Clinical Practicum I: Adult-Gerontological Nurse Practitioner. 2 - 3 Credits.

The course will prepare students to diagnose, treat, deliver patient education, and follow-up common acute illnesses in adult-gero patients. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of adult care settings. 112 clinical hours. Prerequisite: NR.210.640 Corequisite: NR.210.641

Prerequisite(s): NR.210.640 is a prerequisite for this course.

NR.210.646. Clinical Practicum II: Adult-Gerontological Nurse Practitioner. 2 - 3 Credits.

The course will prepare students to diagnose, treat, deliver patient education, and follow-up common acute and chronic illnesses in adults. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of adult care settings. 112 clinical hours. Prerequisites: NR.210.641 and 210.645 Corequisite: NR.210.642

Prerequisite(s): NR.210.641 and 645 are prerequisites for this course.

NR.210.647. Clinical Practicum III: Adult-Gerontological Nurse Practitioner. 2 Credits.

The course will prepare students to diagnose, treat, deliver patient education, and follow-up common and complex acute illnesses and common chronic illnesses in adults. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of adult care settings. 112 clinical hours. Prerequisites: NR.210.642 and 210.646 Corequisite: NR.210.643

Prerequisite(s): NR.210.642 and 646 are prerequisites for this course.

NR.210.648. Clinical Practicum IV: Adult-Gerontological Nurse Practitioner. 2 Credits.

The course will prepare students to diagnose, treat, deliver patient education, and follow-up common and complex acute illnesses and common and complex chronic illnesses in adults. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of adult care settings. 112 clinical hours. Prerequisites: NR.210.643 and 210.647 Corequisite: NR.210.644

Prerequisite(s): NR.210.643 and 647 are prerequisites for this course.

NR.210.649. Clinical Practicum V: Adult-Gerontological Nurse Practitioner. 4 Credits.

The course will advance students towards independence in the role of adult/gerontology nurse practitioner in prevention, screening, illness, and care transition for adults. It integrates biomedical, psychological, social and nursing aspects of care based on age, gender, culture, and ethnicity. Application and utilization of evidence is emphasized in a variety of adult care settings. 224 clinical hours. Prerequisites: NR.210.644 and 210.648

Prerequisite(s): NR.210.644 and 648 are prerequisites for this course.

NR.210.650. Clinical Judgment I-The Role of the CNS in Clinical Decision Making: Common Health Problems. 3 Credits.

This is the first of three sequential theory courses that will provide the clinical nurse specialist (CNS) student with opportunities to demonstrate advanced clinical judgment and to increase their depth of knowledge across the health care continuum within a population focus. The student will synthesize knowledge of common health problems and advanced assessment; develop and evaluate evidence-based nursing and symptom management plans of care; propose strategies for measuring outcomes-driven care; recommend strategies for patient and professional education in the care of patients and their families; and recommend appropriate referrals and consultations across the health care continuum within a population focus. Prerequisites: NR.210.600, 210.601, 210.602

Prerequisite(s): NR.210.600, 601, and 602 are prerequisites for this course.

NR.210.651. Clinical Judgment II-The Role of the CNS in Clinical Decision Making: Acute & Chronic Health Problems. 3 Credits.

This is the second of three sequential theory courses that will prepare the clinical nurse specialist (CNS) student with opportunities to demonstrate advanced clinical judgment and to increase their depth of knowledge across the health care continuum within a population focus. The student will synthesize knowledge of acute and chronic health problems and advanced assessment; develop and evaluate evidence-based nursing and symptom management plans of care; propose strategies for measuring outcomes-driven care; recommend strategies for patient and professional education in the care of patients and their families; and recommend appropriate referrals and consultations across the health care continuum within a population focus. Prerequisite: NR.210.650 Pre or corequisite: NR.210.653

Prerequisite(s): NR.210.650 is a prerequisite for this course.

NR.210.652. Clinical Judgment III-The Role of the CNS in Clinical Decision Making: Complex Health Problems. 3 Credits.

This is the third of three sequential theory courses that will prepare the clinical nurse specialist (CNS) student with opportunities to demonstrate advanced clinical judgment and to increase their depth of knowledge across the health care continuum within a population focus. The student will synthesize knowledge of complex health problems and advanced assessment; develop and evaluate evidence-based nursing and symptom management plans of care; propose strategies for measuring outcomes-driven care; recommend strategies for patient and professional education in the care of patients and their families; and recommend appropriate referrals and consultations across the health care continuum within a population focus. Prerequisite: NR.210.651 Pre or corequisite: NR.210.653
Prerequisite(s): NR.210.651 is a prerequisite for this course.

NR.210.653. Clinical Practicum I-Clinical Nurse Specialist: Advanced Practice Management. 3 Credits.

This is the first of four sequential clinical practicum courses that provide the clinical nurse specialist (CNS) student with opportunities to develop knowledge and skills in the diverse roles and skills of a CNS. Based on the student's past experience, this practicum is individualized and focuses on the roles and essential skills of the CNS within a population focus. Students are expected to integrate knowledge of disease, evidence based practice, advanced care coordination, and principles of patient/staff education as components of advanced nursing practice in the care of patients and families across the continuum of health care. Students begin to integrate and apply their understanding across the three spheres of influence with emphasis on the patient sphere. Under the guidance of a clinical instructor and experienced preceptor, the clinical nurse specialist (CNS) student will participate in 168 practicum hours within their population focus. Prerequisite: NR.210.650

Prerequisite(s): NR.210.650 is a prerequisite for this course.

NR.210.654. Clinical Practicum II-Clinical Nurse Specialist: Advanced Practice Management. 3 - 4 Credits.

This is the second of four sequential clinical practicum courses that provide the clinical nurse specialist (CNS) student with opportunities to increase knowledge and skills in the diverse roles and skills of a CNS. This course builds on previous CNS coursework. This practicum is individualized and focuses on application of the roles and essential skills of the CNS within a population focus. Students are expected to integrate knowledge of disease, evidence based practice, advanced care coordination, and principles of patient/staff education as components of advanced nursing practice in the care of patients and families across the continuum of health care. Students integrate and apply their understanding across the three spheres of influence with emphasis on the patient and nurse and nursing practice spheres. Under the guidance of a clinical instructor and experienced preceptor, the clinical nurse specialist (CNS) student will participate in 168 practicum hours within their population focus. Prerequisite: NR.210.653 Pre or corequisite: NR.210.651

Prerequisite(s): NR.210.653 is a prerequisite for this course.

NR.210.655. Clinical Practicum III-Clinical Nurse Specialist: Advanced Practice Management. 3 Credits.

This is the third of four sequential clinical practicum courses that prepare the clinical nurse specialist (CNS) student with opportunities to increase knowledge and skills in the diverse roles and skills of a CNS. This course builds on previous CNS coursework. This practicum is individualized and focuses on organizational and systems leadership in application of the roles and essential skills of the CNS within a population focus. Students are expected to integrate knowledge of disease, evidence based practice, advanced care coordination, and principles of patient/staff education as components of advanced nursing practice in the care of patients and families across the continuum of health care. Students integrate and apply their understanding across the three spheres of influence: Patient, nurse/nursing practice, and organization/system spheres. Under the guidance of a clinical instructor and experienced preceptor, the clinical nurse specialist (CNS) student will participate in 168 practicum hours within their population focus. Prerequisite: NR.210.654 Corequisite: NR.210.652

Prerequisite(s): NR.210.654 is a prerequisite for this course.

NR.210.656. Clinical Practicum IV-Clinical Nurse Specialist: Advanced Practice Management. 3 - 4 Credits.

This is the fourth of four sequential clinical practicum courses that prepare the clinical nurse specialist (CNS) student with opportunities to increase knowledge and skills in the diverse roles and skills of a CNS. This course builds on previous CNS coursework. This practicum is individualized and focuses on evaluation of clinical practice in application of the roles and essential skills of the CNS within a population focus. Students are expected to integrate knowledge of disease, evidence based practice, advanced care coordination, and principles of patient/staff education as components of advanced nursing practice in the care of patients and families with complex needs across the continuum of health care. Students integrate and apply their understanding across the three spheres of influence: Patient, nurse/nursing practice, and organization/system spheres. Under the guidance of a clinical instructor and experienced preceptor, the clinical nurse specialist (CNS) student will participate in 168 practicum hours within their population focus. Prerequisites: NR.210.652 and 210.655

Prerequisite(s): NR.210.652 and 210.655 are prerequisites for this course.

NR.210.660. Introduction to Acute Care. 4 Credits.

This course provides foundational content for Adult-Gerontological Acute Care Nurse Practitioner (AG-ACNP) students to critically think about symptoms, differential diagnoses, evidence-based diagnostic evaluation and management of common acute and chronic illness disease processes based on age, gender, sexuality, culture, ethnicity, psychosocial issues, and integrates ethical principles in decision making. Content focuses on the AG-ACNP role, scope of practice and principles of diagnostic and advanced technologies to provide selected interventions in the care of acutely and critically ill adults across the lifespan. Unique characteristics and risks associated with hospitalized patients are also addressed. Concentrated clinical instruction will allow the AG-ACNP student to develop advanced assessment strategies while enhancing history taking and physical assessment skills. 56 clinical hours. Prerequisites: NR.210.600, 210.601, 210.602, 210.605

Prerequisite(s): NR.210.600, 210.601, and 210.602 are prerequisites for this course.

NR.210.661. Advanced Practice in Acute Care I. 6 Credits.

This is the first of four specialty courses that introduces clinical skills combined with evidence-based practice emphasizing the integration of theory, comprehensive assessment and advanced technologies for acutely ill adults across the lifespan in acute and critical care settings. Content focuses on the pathophysiology, subjective and objective clinical data, differential diagnoses and the development of a management plan considering age, gender, sexuality and social determinants of health within the scope of Adult-Gerontological Acute Care Nurse Practitioner (AG-ACNP) practice. Supervised clinical instruction in acute and critical care settings allows the AG-ACNP student to perform comprehensive assessment skills, diagnosis and management including incorporating relevant diagnostic and therapeutic testing modalities. 168 clinical hours. Prerequisite: NR.210.660

Prerequisite(s): NR.210.660 is a prerequisite for this course.

NR.210.662. Advanced Practice in Acute Care II. 4 Credits.

This is the second of four specialty courses that fosters advanced clinical skills while incorporating evidence-based practice emphasizing the integration of theory, comprehensive assessment and advanced technologies for acutely ill adults across the lifespan in acute and critical care settings. Content focuses on pathophysiology, subjective and objective clinical data, differential diagnoses and the development of a management plan considering age, gender, sexuality and social determinants of health within the scope of Adult-Gerontological Acute Care Nurse Practitioner (AG-ACNP) practice. Supervised clinical instruction in acute and critical care settings allows the AG-ACNP student to improve comprehensive clinical assessment skills including tailoring diagnostic and therapeutic testing modalities. 168 clinical hours. Prerequisite: NR.210.661

Prerequisite(s): NR.210.661 is a prerequisite for this course.

NR.210.663. Advanced Practice in Acute Care III. 4 Credits.

This is the third of four specialty courses that prepares students to assess, diagnose and manage acutely ill adults across the lifespan while emphasizing high acuity of disease entities encountered in acute and critical care settings. Content focuses on incorporating evidence-based practice while utilizing pathophysiology, subjective and objective clinical data, differential diagnoses and the development of a management plan considering age, gender, sexuality and social determinants of health within the scope of Adult-Gerontological Acute Care Nurse Practitioner (AG-ACNP) practice. Supervised clinical instruction in acute and critical care settings allows the AG-ACNP student to enhance comprehensive clinical assessment skills including modifying diagnostic and therapeutic testing modalities. 168 clinical hours. Prerequisite: NR.210.662

Prerequisite(s): NR.210.662 is a prerequisite for this course.

NR.210.664. Advanced Practice in Acute Care IV. 6 Credits.

This is the fourth of four specialized courses that prepares students to assess, diagnose and manage acutely ill adults across the lifespan while emphasizing the highest acuity of disease entities encountered in acute and critical care settings. Content focuses on incorporating evidence-based practice while utilizing pathophysiology, subjective and objective clinical data, differential diagnoses and the development of a management plan considering age, gender, sexuality and social determinants of health within the scope of Adult-Gerontological Acute Care Nurse Practitioner (AG-ACNP) practice. Supervised clinical instruction in acute and critical care settings allows the AG-ACNP student to enrich comprehensive clinical assessment skills including individualizing diagnostic and therapeutic testing modalities. Additionally, palliative care clinical experiences will be provided. 224 clinical hours. Prerequisite: NR.210.663

Prerequisite(s): NR.210.663 is a prerequisite for this course.

NR.210.670. Human Anatomy. 4 Credits.

This four week course offered by the Center for Functional and Evolutionary Anatomy within the JHU School of Medicine meets for 4 hours each day, 5 days a week. It is designed to give undergraduate and graduate students an introduction to all aspects of human anatomy, and includes demonstrations using human cadavers. A regional approach will be employed, beginning with the thorax and abdomen, continuing with the limbs, and ending with the head and neck. Lectures on each topic will be given in the morning, followed by prosection demonstrations (i.e., dissections prepared by departmental staff and presented to students) on human cadavers in the afternoon. Course materials will also involve hands-on work with human bones, various imaging modalities (e.g., radiographs, CT scans), and computer programs. Opportunities are also available for students to observe surgical procedures at the Johns Hopkins Hospital. Student performance will be evaluated by both written and practical (cadaver-based) exams. <https://esgweb1.nts.jhu.edu/faq/anatomyinstitute/>

NR.210.671. Advanced Pharmacology for Nurse Anesthesiology. 3 Credits.

This course is designed to provide an in-depth foundation of advanced pharmacology principles and their application to anesthesia across the lifespan, including special populations. The course provides detailed explorations of the uptake, distribution, biotransformation, and elimination of currently used clinical anesthesia pharmacotherapeutics. Pharmacogenetic disorders with specific anesthesia implications are examined. Various agents affecting the autonomic nervous system are detailed. Chemotherapeutic agents and anesthetic considerations will be covered. Prerequisite: NR.210.602

NR.210.672. Advanced Physiology/Pathophysiology for Nurse Anesthesiology. 4 Credits.

This course will review physiology/pathophysiology relevant to anesthesia practice. Anatomy, physiology and pathophysiology across the lifespan and special populations will be addressed. This course will build upon the advanced physiology/pathophysiology course and focus on the relationship to anesthesia planning and management. Evidence-based practice resulting from relevant research will be incorporated to develop anesthetic plans of care for patients with health status alterations. Students will utilize this information to build a foundation for anesthesia clinical reasoning. Prerequisite: NR.210.600

NR.210.673. Introduction to Anesthesia Equipment, Technology, and Clinical Practice. 2 Credits.

This course introduces students to equipment and technology used in anesthesia practice with an emphasis on patient safety. This course also focuses on student simulation experiences and class discussions in conjunction with in-hospital observational experiences. Prerequisites: NR.210.671 and 210.672 Corequisites: NR.210.674 and 210.675

NR.210.674. Professional Aspects of Nurse Anesthesiology Practice. 3 Credits.

This course examines the professional role development of the nurse anesthesiologist. Course content focuses on: history of nurse anesthesiology; scope and standards of nurse anesthesiology practice; professional ethics; regulation of practice (governmental and nongovernmental); the healthcare delivery system; legal aspects of anesthesia practice; business of anesthesia (including practice management and anesthesia reimbursement, payment policies, CRNA practice patterns); wellness and substance use disorder; structure and function of state, national, and international anesthesia organizations; professional advocacy and issues in CRNA practice; assessing quality in anesthesia practice; cultural competence; healthcare informatics; and interprofessional collaboration to improve health care. This course provides students with a comprehensive description of the nurse anesthesiology profession. Prerequisites: NR.210.671 and 210.672

NR.210.675. Nurse Anesthesiology Principles I. 2 Credits.

The focus of this course is the development of foundational knowledge to deliver safe, effective anesthesia care across the lifespan. Emphasis will be placed on preanesthesia assessment, evaluation and preparation (patient and anesthetizing area); utilization and interpretation of data (labs and diagnostic exams); formulation and evaluation of anesthesia plans; communication and documentation; fluid assessment and management; patient positioning; anesthesia techniques and complications; and pain theory/ pain management (acute, chronic); postanesthesia care/respiratory therapy. Relevant literature related to evidence-based best practices will be reviewed. Simulation will be incorporated in the course. Prerequisites: NR.210.671 and 210.672 Corequisites: NR.210.673 and 210.674

NR.210.676. Nurse Anesthesiology Principles II. 3 Credits.

This course is the second of four anesthesia principles courses and builds on knowledge gained from the first anesthesia principles course. This course provides students with the foundation to provide safe, evidence-based anesthesia to special populations, to patients undergoing local/regional anesthesia, and to patients undergoing common procedures. Anesthesia considerations of geriatric and obese patients will be discussed to include: anatomy, physiology, pathophysiology, pharmacology, anesthetic techniques, and management of complications. Anesthetic management and considerations of patients having various surgeries (orthopedic, intra-abdominal, extrathoracic, extracranial, neck, perineal/pelvic procedures) will be discussed. Local and regional anesthesia techniques will be discussed to include: pharmacology, technique, physiologic alterations, and complications. There will also be a review of enhanced recovery after surgery (ERAS) and hypotensive anesthetic technique. Relevant literature related to evidence-based best practices will be reviewed. Simulation will be incorporated in the course. Prerequisites: NR.210.673, 210.674 and 210.675 Corequisite: NR.210.679

NR.210.677. Nurse Anesthesiology Principles III. 2 Credits.

This is the third of four anesthesia principles courses and builds on knowledge gained from the previous anesthesia principles courses. Anesthesia considerations of pediatric and obstetric patients will be discussed to include: anatomy, physiology, pathophysiology, pharmacology, anesthetic techniques, and management of complications. Relevant literature related to evidence-based best practices will be reviewed. This course provides students with the foundation to provide safe, evidence-based anesthesia to special populations. Simulation will be incorporated in the course. Prerequisites: NR.210.676 and 210.679 Corequisite: NR.210.680

NR.210.678. Nurse Anesthesiology Principles IV. 2 Credits.

This course is the last anesthesia principles course and builds upon knowledge gained in the first three principles courses. Course content encompasses anesthesia for surgical procedures including: intrathoracic, intracranial, vascular, neuroskeletal, diagnostic/therapeutic procedures, and other surgical procedures (trauma, burns, resuscitation, organ transplants, organ procurement, and laser procedures). Principles and ethical concepts of palliative care will also be discussed. Relevant literature related to evidence-based best practices will be reviewed. This course provides students with the foundation to provide safe evidence-based anesthesia for patients undergoing specialty procedures. Simulation will be incorporated in the course. Prerequisites: NR.210.677 and 210.680 Corequisite: NR.210.681

NR.210.679. Clinical Residency I. 3 Credits.

This is the first of five (5) clinical residency courses. Applications of perianesthesia concepts are integrated throughout the clinical experience. An emphasis on patient safety and vigilance, anesthesia topics of pre-operative evaluation, comprehensive equipment check and prevention of iatrogenic complications for general anesthesia are explored. Experiential learning reflects upon the construction of care plans and application of skills and knowledge taught in didactic portion of the curriculum. 336 clinical hours Prerequisites: NR.210.673, 210.674, and 210.675 Corequisite: NR.210.676

NR.210.680. Clinical Residency II. 4 Credits.

This is the second in a series of five (5) courses. This course builds upon the clinical knowledge and foundational concepts developed in Clinical Residency I and in-hospital experiences. Applications of clinical concepts specific to obstetrical anesthesia, regional anesthesia and pain management are explored through simulation and patient care. Students begin to incorporate evidence-based research practices and an emphasis is placed on patient safety and vigilance, culturally competent care of the patient throughout the peri-anesthesia continuum, interpersonal communication and integration of critical and reflective thinking of an anesthesia provider. DNP practicum hours will be incorporated into this course for the development of the DNP project. 448 clinical hours Prerequisites: NR.210.676 and 210.679 Corequisite: NR.210.677

NR.210.681. Clinical Residency III. 4 Credits.

This course builds upon the clinical knowledge and foundational concepts developed in Clinical Residencies I and II. Applications of clinical concepts specific to cardiovascular and thoracic anesthesia, neurosurgical anesthesia and more advanced anesthesia specialty cases are fundamentally explored through simulation and hands on workshops. Students begin to incorporate evidence based research practices and an emphasis is placed on patient safety and vigilance, culturally competent care of the patient throughout the peri-anesthesia continuum, interpersonal communication and integration of critical and reflective thinking of an anesthesia provider. DNP practicum hours will be incorporated into this course for the implementation of the DNP project. 448 clinical hours Prerequisites: NR.210.677 and 210.680 Corequisite: NR.210.678

NR.210.682. Clinical Residency IV. 4 Credits.

Students use critical thinking skills and best practices in the synthesis and correlation of didactic information to the clinical practice of nurse anesthesia. Students develop, implement, and evaluate anesthesia care plans for all patient populations based on best evidence. Clinical experiences focus on anesthesia care of high acuity patients across the lifespan undergoing elective and emergency surgical and diagnostic procedures. Emphasis on advanced health assessment and differential diagnosis, specialty surgical procedures, insertion of invasive pressure monitoring catheters, advanced airway management and safety and vigilance. Students provide culturally competent care of the patient throughout the perianesthesia continuum. DNP practicum hours will be incorporated into this course for the evaluation of the DNP project. 448 clinical hours Prerequisites: NR.210.678 and 210.681 Corequisite: NR.210.684

NR.210.683. Clinical Residency V. 4 Credits.

Students develop, implement, and evaluate comprehensive anesthesia care plans for all patient populations based on best evidence. Clinical experiences focus on anesthesia care of special patient populations undergoing a wide variety of diagnostic, surgical, and therapeutic procedures. Students demonstrate skills of ultrasound techniques for peripheral nerve blocks and invasive line insertion with minimal supervision. Student teaching and mentorship opportunities are integrated in the simulation lab. In addition, this course provides the third-year student with opportunities to further explore the role of the DNP through the synthesis and application of advanced principles regarding patient safety, risk reduction, healthcare law, healthcare policy, and bioethics for anesthesia practice. 448 clinical hours Prerequisites: NR.210.682 and 210.684 Corequisite: NR.210.685

NR.210.684. Seminars in Nurse Anesthesiology I. 3 Credits.

This is the first in a series of two (2) clinical correlation courses. Selected topics and case studies will be applied in an advanced study of scientific principles, principles of therapeutics, and principles of anesthesia practice in order to further develop critical thinking skills and to foster continued integration of theoretical knowledge into clinical practice. This course includes student participation in discussion of clinical experiences, case presentations, and current evidence-based practice articles from anesthesia related literature. Students will critically analyze, synthesize and evaluate the knowledge gained in all previous nurse anesthesia courses and clinical residencies. This course reviews comprehensive topics encountered on the National Certification Examination (NCE). Data management will also be included in this course and will provide students with the knowledge and skills necessary to develop and execute the evaluation plan for the scholarly project. The comprehensive exam (NBCRNA Self Evaluation Exam) will be taken during this course. Prerequisites: NR.210.678 and 210.681 Corequisite: NR.210.682

NR.210.685. Seminars in Nurse Anesthesiology II. 3 Credits.

This is the second in a series of two (2) clinical correlation courses. Selected topics and case studies will be utilized in an advanced study of scientific principles, principles of therapeutics, and principles of anesthesia practice in order to further develop critical thinking skills and to foster continued integration of theoretical knowledge into clinical practice. This course also includes student participation in discussion of clinical experiences, case presentations, and current evidence-based practice articles from anesthesia related literature. Students will critically analyze, synthesize and evaluate the knowledge gained in all previous nurse anesthesia courses and clinical residencies. This course reviews comprehensive topics encountered on the National Certification Examination (NCE). Prerequisites: NR.210.682 and 210.684 Corequisite: NR.210.683

NR.210.802. Advanced Nursing Health Policy. 2 Credits.

This course examines the public and private sector function of creating and implementing nursing and health policy. The role of political, legal, ethical and social philosophy in defining nursing and health services is examined. There is continued development of student competence in analytic methods for the study of complex nursing and health policy issues. The course considers how policy made by different branches of government and various public and private organizations deeply affects nursing as a profession, its ability to deliver care and the impact on the areas of technology development, assessment and management; professional practice regulation; and patient outcomes management. Prerequisites: NR.210.607

NR.210.803. Nursing Inquiry for Evidence-Based Practice. 3 Credits.

This course utilizes the Johns Hopkins Evidenced-Based Practice Model to guide nursing inquiry. The conceptualization, definition, theoretical rationale and methods of evidenced-based practice will be evaluated, and related research will be described. Production of the integrative review and exploration of systematic reviews are hallmarks of this course. Prerequisites: NR.210.606 and 210.896

NR.210.804. Organizational and Systems Leadership for Quality Care. 2 Credits.

This course facilitates leading, advocating, and managing the application of innovative responses to organizational challenges. Emphasis is placed on development and evaluation of care delivery approaches that meet the needs of targeted patient populations by enhancing accountability for effective and efficient health care, quality improvement, and patient safety. This course focuses on development of strategies to implement change initiatives, manage conflict, and manage the ethical dilemmas inherent in health care organizations.

NR.210.805. Translating Evidence into Practice. 3 Credits.

This course focuses on the integration and application of knowledge into practice. The theories and strategies used to facilitate translation of evidence into practice are considered and analyzed. Theories of change, caring, human needs and value systems are considered with respect to the translation of evidence into practice. A variety of translation strategies, including instructional design, pathways, protocols and programs are discussed. Enablers of translation are considered along with methods of analysis and evaluation. Prerequisites: NR.210.803 and 210.896 Corequisite: NR.210.897

NR.210.806. Health Finance. 2 Credits.

This course introduces students to the business and financial aspects of healthcare. Basic financial concepts and misconceptions about cost behavior, pricing and revenue, and cash flow are explored. Concepts are organized around the financial management paradigm: performance planning, performance measurement and performance management. Students will learn how to prepare several types of budgets, how to use performance reports and dashboards to guide performance, and how to prepare a variety of formal and ad hoc financial analyses. The course concludes with discussions related to improving financial performance, developing improvement plans, and making the “pitch” to decision makers.

NR.210.817. Analysis and Evaluation of Individual and Population Health Data. 3 Credits.

Clinical data management is an essential component of evaluating any Evidence Based Practice/Performance Improvement project. A high caliber data management plan and its implementation will provide key stakeholders and decision-makers with the information necessary to make decisions about the value and continuation of each evidence-based intervention. Components of data management include clearly identified outcomes linked to variables and data sources; appropriate data collected for the purpose of measuring these outcomes; adequate statistical power to determine success of the project; proper data cleaning and manipulation techniques; appropriate statistical methods for measuring the outcomes; and a meaningful presentation of outcomes that addresses the concerns and questions of key stakeholders. The clinical data management course will provide students with the knowledge and skills necessary to develop and execute the data management plan for the scholarly project. Prerequisites: NR.210.606, 210.803, 210.897

NR.210.818. Clinical Data Management and Analyses. 2 Credits.

Clinical data management is essential for the evaluation of any evidence-based practice performance improvement project. A high caliber evaluation plan and its implementation will provide key stakeholders and decision-makers with the information to make decisions about the value and continuance of each evidence-based intervention. Components of an evaluation plan include clearly identified outcomes linked to measures, variables, and data sources; appropriate data collected for the purpose of measuring these outcomes; adequate statistical power to determine success of the project; proper data cleaning and manipulation techniques; appropriate statistical methods for determining the outcomes; and a meaningful presentation of outcomes that addresses the concerns and questions of key stakeholders. This course provides students with the knowledge and skills necessary to develop and execute the evaluation plan for the scholarly project. Prerequisite: NR.210.817. Corequisite: NR.210.899

NR.210.821. Digital Technologies, Artificial Intelligence, and Machine Learning in the Era of Big Data. 2 Credits.**NR.210.822. Health Information Systems and Patient Care Technologies. 2 Credits.**

This course focuses on the evaluation and use of information technology in healthcare at the level of the advanced practice nurse (APN).

NR.210.823. Special Topics: Qualitative Design and Implementation. 1 - 3 Credits.

This course will provide an overview of how qualitative methods can be applied to health-related projects or research. Focus will be on understanding common qualitative approaches used to plan or evaluate programs or research including strategies for collecting, managing and analyzing qualitative data. Prerequisites: NR.210.803 or NR.110.809

NR.210.886. Problem Discovery. 1 - 3 Credits.

This is the first in the series of courses culminating in the DNP Scholarly Project. The purpose of this course is two-fold: first, to introduce the student to the essentials of scholarly writing and the logical presentation of ideas; and second, to then apply these essential skills to the identification of an important practice problem. The student identifies an important practice problem, defines the scope and significance of the problem. For DNP/AP and DNP Executive students in practicum, this course also provides the integrative practice experience necessary for scholarship in translational innovation and improvement for advanced nursing practice and health outcomes. The practicum experience complements the foundational advanced nursing practice experience to identify, develop, implement, evaluate and disseminate the DNP Scholarly Project. Credit hour requirements vary based on the student and degree plan.

NR.210.887. Project Advancement. 1 - 3 Credits.

This is the second of four scholarly project courses. This course focuses on the development of the comprehensive plan for the DNP Scholarly Project. The student develops the plan to ensure translation of the evidence in addressing a significant clinical problem. The student develops the full application for submission to the Institutional Review Board/Ethics Committee. For DNP/AP and DNP Executive students in practicum, this course also provides the integrative practice experience necessary for scholarship in translational innovation and improvement for advanced nursing practice and health outcomes. The practicum experience complements the foundational advanced nursing practice experience to identify, develop, implement, evaluate and disseminate the DNP Scholarly Project. Credit hour requirements vary based on the student and degree plan.

NR.210.888. Project Application. 1 - 3 Credits.

This scholarly project course is the third in the series of four courses. In this course the student implements the approved project plan. This course fosters the student's development of requisite skills for project implementation, such as managing time and resources, assessing and managing implementation issues, and utilizing communication and collaboration strategies. For DNP/AP and DNP Executive students in practicum, this course also provides the integrative practice experience necessary for scholarship in translational innovation and improvement for advanced nursing practice and health outcomes. The practicum experience complements the foundational advanced nursing practice experience to identify, develop, implement, evaluate and disseminate the DNP Scholarly Project. Credit hour requirements vary based on the student and degree plan.

NR.210.889. Project Evaluation and Dissemination. 1 - 3 Credits.

This is the final component of the scholarly project sequence. Content, as in the other project experiences, reflects the interest of the student and is designed to meet individual student needs and career goals. This final course allows the student, with guidance from mentor and faculty, to complete the clinical project and finalize the scholarly written and oral reports that disseminate and integrate new knowledge. The final products will reflect the student's ability to employ effective communication and collaboration skills, take a leadership role, influence health care quality and safety, transform practice, lead clinical innovation, and successfully negotiate change in health care delivery for individuals, families, populations, or systems across a broad spectrum of healthcare. This course also provides the integrative practice experience necessary for scholarship in translational innovation and improvement for advanced nursing practice and health outcomes. The practicum experience complements the foundational advanced nursing practice I experience to identify, develop, implement, evaluate and disseminate the DNP Scholarly Project.

NR.210.894. DNP Practicum. 1 - 2 Credits.

This course provides the integrative practice experience necessary for scholarship in translational innovation and improvement for advanced nursing practice and health outcomes. The practicum experience complements the foundational advanced practice clinical experience to identify, develop, implement, evaluate and disseminate the DNP Scholarly Project. This course is taken concurrently with the DNP Scholarly Project didactic courses. Credit hour requirements vary based on the student specialty track and degree plan. Corequisites: 210.896, 210.897, 210.898, 210.899

NR.210.895. Independent Study. 1 - 3 Credits.

Scholarly activity under guidance of faculty serves to help students achieve professional goals. This course may be taken as elective credit.

NR.210.896. Problem Identification. 1 Credit.

This is the first in the series of courses culminating in the DNP Scholarly Project. The purpose of this course is two-fold: first, to introduce the student to the essentials of scholarly writing and the logical presentation of ideas; and second, to then apply these essential skills to the identification of an important practice problem. The student identifies an important practice problem, defines the scope and significance of the problem. Prerequisite: NR.210.608 Corequisite: NR.210.894

NR.210.897. Project Development. 1 Credit.

The second scholarly project experience will provide students with the support and direction needed in collaboration with the sponsoring facility and mentor to develop a comprehensive, site specific project, evaluation plan, and IRB proposal. Prerequisites: NR.210.803 and 210.896 Corequisite: NR.210.805 and 210.894

NR.210.898. Project Implementation. 1 Credit.

This scholarly project course is the third in the series of four courses. In this course the student implements the approved project plan. This course fosters the student's development of requisite skills for project implementation, such as managing time and resources, assessing and managing implementation issues, and utilizing communication and collaboration strategies. Prerequisites: NR.210.817 and 210.897; Documented IRB approval Corequisite: NR.210.894

NR.210.899. Project Evaluation. 1 Credit.

This is the final component of the scholarly project sequence. Content, as in the other project experiences, reflects the interest of the student and is designed to meet individual student needs and career goals. This final course allows the student, with guidance from mentor and faculty, to complete the clinical project and finalize the scholarly written and oral reports that disseminate and integrate new knowledge. The final products will reflect the student's ability to employ effective communication and collaboration skills, take a leadership role, influence health care quality and safety, transform practice, lead clinical innovation, and successfully negotiate change in health care delivery for individuals, families, populations, or systems across a broad spectrum of healthcare. Prerequisites: NR.210.898 Corequisites: NR.210.818 and 210.894

NR.500.601. Public Health Nursing Theory & Practice. 3 Credits.

Analysis of theories relevant to nursing and public health will assist the student in the identification of the unique role of public health nursing across settings. Students will explore the role and function of public health nursing in primary and secondary prevention in the community, state and nation. Special emphasis will be placed on assessing the community as client and developing models of community-based health promotion and prevention.

NR.500.602. Public Health Nursing Theory & Practice - Practicum. 3 Credits.

Students enrolled in this course conduct a community assessment and write a proposal to address or prevent a risk factor or health problem in that population/community. The practicum is conducted in a community agency or established program. 168 hours clinical. Prerequisites: NR.500.601, 500.604, PH.340.601, PH.140.611 & 612 OR PH.140.621, 622 & 623

NR.500.604. Population-Based Public Health Nursing Interventions. 3 Credits.

This course will integrate evidence based practice from the public health and public health nursing fields and is designed to be a practicum course to build practice skills within a variety of public health settings. The course will focus on interventions that include the individual/family, community and systems levels with an emphasis on the community/systems levels. The 17 public health interventions in the Public Health Nursing Intervention Wheel will be the basis of seminar discussions and placement within a variety of settings. Research in the fields of public health and public health nursing will be used to substantiate interventions. 168 clinical hours Prerequisite: NR.500.601

NR.500.605. Public Health Nursing Leadership & Management. 3 Credits.

This online course is focused on the analysis, integration and application of principles of leadership and management to health care organizations and to population-based efforts across the public health care delivery system. Special emphasis is placed on the practical skills needed for nurses to succeed as leaders and managers in today's local, state, national and international health care and/or public health environment. Although this course is not clinical, students will have several opportunities to practice leadership-related skills through group case-based learning that will focus on leadership, organizational assessment, financial resource decision making and allocation, diversity in the workforce and quality improvement. Prerequisite: NR 500.601

NR.500.606. Public Health Nursing Leadership, Management, & Evaluation Capstone Practicum. 3 Credits.

The course content addresses the application of principles and theories of leadership, management, and evaluation in a public health nursing setting. The educational focus will be mentored, but student-directed, leadership and evaluation skills development. Each student will be expected to complete an internship with a public health-related agency. During this placement, the student will conduct a program evaluation and analyze the use of management and leadership skills within the agency. The student's leadership skill development will be enhanced by working collaboratively with leaders in their host agency. Early in the semester, each student will identify her/his specific learning and skills development objectives. Faculty will guide students through the process of meeting these. Weekly seminars complement the field experience. 168 hours clinical. Prerequisites: NR 110.560 and 500.602, 604, 605, PH.340.601, PH.140.611 & 612 OR PH.140.621, 622, & 623

NR.500.607. Public Health Nursing/NP Capstone Practicum. 1 Credit.

This course will provide MSN-NP/MPH students with the opportunity to integrate their knowledge of public health problems and population-based assessment, prevention and intervention, with direct care and evaluation of clinical outcomes. Applying this knowledge to the evaluation of public health policy will be an integrating theme of the course. This course will fulfill the SPH Capstone and Integrating Experience requirement. 56 hours clinical. Prerequisites: NR.500.601, 500.602, 500.605, PH.340.601, PH.140.611 and 140.612 OR PH 140.621-140.623 Corequisite: NR.110.560