

Course Descriptions

Core Courses		
Course #	Course Name	Course Description
NSG 701 (online)	Advanced Pharmacology (3 credit hours, didactic, Spring only)	PR: NSG 706. Examination of the relationship between pharmacologic principles and the APRN's selection of pharmacologic agents in altered health states across the lifespan
NSG 702 (online)	Population Health Promotion (3 credit hours, didactic, Summer only)	PR: None. Use population health science for the promotion of health and prevention of disease in individuals, communities, and populations.
NSG 704 (online)	Foundations of Leadership for the Advanced Practice Nurse (3 credit hours, didactic, Fall only)	PR: None. Explore foundations of personal, professional, and leadership development within the role of the advanced practice nurse.
NSG 705 (online)	Advanced Lifespan Health Assessment (3 credit hours, didactic, Spring only)	PR: NSG 706. Advanced health assessment, which includes assessment of all human systems, advanced assessment techniques and skills, concepts, and approaches for individuals across the lifespan.
NSG 706 (online)	Advanced Pathophysiology (3 credit hours, didactic, Fall only)	PR: None. Theoretical basis of pathophysiological changes in acute and chronic illnesses confronted across the lifespan is presented. The course serves as the foundation for clinical assessment, decision making, and management
NSG 707 (online)	Evidence Based Practice (EBP) and Quality Improvement (QI) Methods for the DNP (3 credit hours, didactic, Spring only)	PR: None. This course provides an overview of EBP, QI and research methodologies with a focus on the translation of research into nursing practice. Methods that inform the design of system-level advanced nursing clinical practice interventions are examined to include: clinical practice problem exploration, evidence search and critical appraisal, and practice change implementation, evaluation and dissemination.
NSG 710 (online)	Advanced Nursing Practice Issues, Policy, and Ethics (3 credit hours, didactic, Spring only)	PR: None. An analysis of health policy and advanced nursing practice issues with a focus on advocacy for nursing leadership, ethics, and finance.
NSG 739 (online)	Scientific Underpinnings of the DNP-Prepared Advanced Practice Nurse Role (3 credit hours, didactic, Fall only)	PR: None. This course introduces students to competencies necessary to practice at the highest level within the nursing discipline. The role of the Doctor of Nursing practice-prepared advanced practice nurse is examined in the context of historical, ethical, environmental, clinical, technological, and professional perspectives.
NSG 754 (online)	Advanced Informatics and Healthcare Technologies (3 credit hours, didactic, Spring only)	PR: None. Evaluation and utilization of information systems and technology to improve quality, safety, and system outcomes to improve health care.
NSG 829 (online)	Clinical Data Analysis and Visualization (3 credit hours, didactic, Summer only)	PR: None. This required course provides students with the skills to collect, manage, analyze, and interpret clinical data to evaluate quality improvement and evidence-based practice initiatives. Students will apply data analysis techniques and use data visualization tools to support clinical decision-making and dissemination.

Nurse Anesthesia Specialty Courses		
Course #	Course Name	Course Description
NSG 740A	Overview of the Nurse Anesthesia Profession, Role and Standards (2 credit hours, didactic, Fall only)	PR: None. This course provides perspectives on the history of the nurse anesthesia profession, professional roles, and standards guiding the curricula and regulations pertinent to nurse anesthesia practice
NSG 740B	Professional Issues in Nurse Anesthesia (2 credit hours, didactic, Fall only)	PR: NSG 740A. This course builds upon themes related to the role of the nurse anesthetist, which were presented in NSG 740A. Topics include safety, professional interactions, added value of a nurse anesthetist in a variety of arenas, legal issues, and future trends as related to the role of the CRNA.
NSG 741 (online)	Genetics, Chemistry, and Physics of Anesthesia (3 credit hours, didactic, Spring only)	PR: NSG 706. The student will examine science-based principles of genetics, chemistry, and physics that relate to the mechanisms and effects of anesthesia. Mathematics concepts such as converting systems of measurement and calculating drug infusion rates will be explored. Components and functions of the anesthesia gas machine will be introduced.
NSG 742A	Foundations of Anesthesia 1: Basic Principles of Safe Anesthesia Care (3 credit hours, didactic, Summer only)	PR: NSG 741 and PR or CONC: NSG 743 and 752A. Basic principles of safe general anesthesia care are introduced in this didactic course.
NSG 742B	Foundations of Anesthesia 2: Regional Anesthesia and Considerations for Common Procedures (2 credit hours, didactic, Fall only)	PR: NSG 742A. Basic principles of safe administration of regional and general anesthesia are reinforced in this course.
NSG 743	Foundations of Anesthesia Lab (1 credit hour, didactic, Summer only)	PR or CONC: NSG 742A and NSG 752A. Basic principles of initiating and maintaining safe general anesthesia care are applied and reinforced in this lab course
NSG 744A	Advanced Anatomy, Physiology, Pathophysiology 1: Cardiac, Pulmonary, and CNS (3 credit hours, didactic, Fall only)	PR: NSG 742A. This course reinforces advanced concepts in anatomy, physiology, and pathophysiology, incorporating the effects of anesthesia, and discussing management principles for disorders associated with the cardiovascular, pulmonary, and central nervous systems
NSG 744B	Advanced Anatomy, Physiology, and Pathophysiology 2: Hepatic, Renal, and Related Systems (2 credit hours, didactic, Spring only)	PR: NSG 744A. The focus of this course is to continue addressing advanced concepts presented in NSG 744A. Anatomy, physiology, and pathophysiology are presented, incorporating the effects of anesthesia, and discussing management principles for disorders associated with the hepatic, renal, endocrine, gastrointestinal, immune, and related systems.
NSG 746 (online)	Advanced Pharmacology for Nurse Anesthetists (3 credit hours, didactic, Fall only)	PR: NSG 701. This course reinforces principles of pharmacology in anesthesia practice. Pharmacologic properties of anesthetic agents and common adjunctive drugs are discussed to enable the student to develop advanced plans for anesthetic management.
NSG 747	Perioperative Assessment and Care	PR: NSG 705. Students in this lab course apply principles of advanced assessment to nurse anesthesia practice. Comprehensive health history, in-depth physical

	(1 credit hour, didactic, Spring only)	exam techniques, and evidence-based diagnostic skills are expanded to emphasize critical thinking and decision-making in the perioperative environment. Students will demonstrate use of advanced airway devices and ultrasound to improve patient care.
NSG 748A	Advanced Principles of Anesthesia 1: Cardiothoracic, Vascular, and Neuroanesthesia (3 credit hours, didactic, Spring only)	PR: NSG 742A and NSG 744A. Advanced principles of anesthesia management for cardiac, thoracic, vascular, and neurosurgical procedures are presented in this course. Students examine techniques to administer anesthesia to patients undergoing procedures including coronary bypass grafting, lung resections, endovascular aortic repairs, and intracranial tumor resections.
NSG 748B (online)	Advanced Principles of Anesthesia 2: Management Across the Lifespan (3 credit hours, didactic, Summer only)	PR: NSG 748A. Advanced principles of anesthesia including obstetric and pediatric specialties are presented. Students examine anatomy, physiology, pathophysiology, and anesthetic management unique to the obstetric and pediatric populations. Simulations of induction and management for pediatric patients, aged from neonate to 18 years, and all levels of acuity will be conducted to reinforce didactic concepts.
NSG 748C	Advanced Principles of Anesthesia 3: Management of Special Populations (3 credit hours, didactic, Fall only)	PR: NSG 748B. Advanced principles of anesthetic management including trauma, abdominal transplant, burns, and pain management populations are presented in this course. Students will examine and apply techniques of difficult airway management, blood volume resuscitation, hemodynamic control, and acute and chronic pain management.
NSG 749	Business, Management, and Finance in Nurse Anesthesia Practice (3 credit hours, didactic, Spring only)	PR: NSG 704 and NSG 740B. Principles of business, management, and finance are applied to nurse anesthesia in this course. Students will analyze reimbursement and billing models, develop plans for business, and evaluate contracts for independent and hospital employment. Management relationships with staff, human resources, and other departments in a health organization will be evaluated. Health care and personal finance will be discussed.
NSG 751	Evidence Based Anesthesia Review Seminar (3 credit hours, didactic, Summer only)	PR: NSG 749 and NSG 810. An evidence-based update and review of the body of knowledge necessary to enter nurse anesthesia practice is the focus of this course. Students will revisit basic sciences, basic and advanced principles of anesthesia, pharmacology, and age and procedure-related management concepts. Students will sit for a threshold Comprehensive Exam based on the entire curriculum of the West Virginia University DNP Nurse Anesthetist Program.
Nurse Anesthesia Clinical Practicum Courses		
Course #	Course Name	Course Description
NSG 752A	Foundations Clinical Practicum 1 (1 credit hour, clinical)	PR or CONC: NSG 742A and NSG 752A. Students will integrate basic anesthesia principles into practice in this introductory clinical practicum course.
NSG 752B	Foundations Clinical Practicum 2 (2 credit hours, clinical)	PR: NSG 752A and PR or CONC: NSG 742B. Students continue to integrate basic principles of general and regional anesthesia in this second foundational clinical practicum course.
NSG 753A	Advanced Clinical Practicum 1 (2 credit hours, clinical)	PR: NSG 752B and PR or CONC: NSG 748A. This third clinical practicum integrates advanced anesthesia principles into clinical practice. The student will continue to develop competency with monitoring, use of equipment, administration of medications, and gain greater experience in anesthesia management of increasingly complex cardiac, thoracic, vascular, and neurosurgical procedures.

NSG 753B	Advanced Clinical Practicum 2 (2 credit hours, clinical)	PR: NSG 753A and PR or CONC: NSG 748B. This fourth clinical practicum continues the integration of advanced anesthesia principles into practice. The student will continue to develop competency with monitoring, use of equipment, administration of medications, and gain experience in anesthesia management including obstetric and pediatric patients.
NSG 753C	Advanced Clinical Practicum 3 (3 credit hours, clinical)	PR: NSG 753B and PR or CONC: NSG 748C. This fifth clinical practicum is designed to integrate advanced anesthesia principles with preparation for clinical immersion. The student will continue to manage general and specialty anesthetic techniques for patients with complex comorbidities and broaden experience in care of special populations.
NSG 810	Nurse Anesthesia Clinical Immersion 1 (3 credit hours, clinical)	PR: NSG 753C. This sixth clinical practicum is designed to immerse the student in advanced professional practice as a nurse anesthetist. Students develop clinical leadership skills in experiences ranging from a team-oriented academic trauma center to a community hospital with nurse anesthetists in independent practice.
NSG 812	Nurse Anesthesia Clinical Immersion 2 (2 credit hours, clinical)	PR: NSG 810. This seventh clinical practicum is designed to conclude the student's clinical immersion and marks the transition from student to advanced professional practice as a nurse anesthetist. Clinical experiences range from team-oriented, academic trauma centers to community hospitals with independent CRNA practitioners.
DNP Project Courses		
Course #	Course Name	Course Description
NSG 830 (online)	DNP Project Development (2 credit hours, didactic, Summer only)	PR: NSG 707 and concurrent with NSG 829. The Doctor of Nursing Practice (DNP) student will utilize a framework to develop a scholarly DNP Project to address a clinical problem.
NSG 831 (online)	DNP Project Implementation (Total of 2 credit hours, variable credit, didactic)	PR: NSG 830. The Doctor of Nursing Practice (DNP) student will lead an interprofessional team to implement and evaluate a scholarly initiative that addresses a clinical problem.
NSG 832 (online)	DNP Project Evaluation and Dissemination (Total of 2 credit hours, variable credit, didactic)	PR: NSG 830 for 2 credits and NSG 831 for 2 credits. This culminating DNP Project course provides an opportunity for students to disseminate their project outcomes and practice implications, reflect on professional growth cultivated during the project journey, and develop a comprehensive portfolio demonstrating how the project has fostered competency at the highest level of the AACN <i>Essentials</i> .

