

| DNP Core Courses | | |
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| Course # | Course Name | Course Description |
| NSG 701 (online) | Advanced Pharmacotherapeutics | This course emphasizes pharmacological principles fundamental to the age and gender appropriate selection of pharmacologic agents in altered health states across the lifespan. Content includes the pharmacodynamics and pharmacotherapeutic properties of drug categories and specific agents; clinical responses to the use of pharmacologic agents; efficacy and cost-effectiveness issues; patient education, adherence, culture, genetics, genomics, and the legal requirements of prescriptive authority. |
| NSG 702 (online) | Population Health Promotion | This course explores epidemiological, environmental, psychological, social, cultural, and gender as key factors that impact health across the lifespan; and explores health promotion concepts including health, wellness, disease, quality of life, health, promotion and disease-prevention interventions and factors that impede health lifestyle changes. The student will explore evidence-based interventions that address key lifespan health themes and facilitate evaluation and application of epidemiological, occupational, and environmental data analysis. The student will understand how to develop, implement, and evaluate programs of clinical prevention and population health for individuals, aggregates, and populations. |
| NSG 704 (online) | Health Care Leadership | This course focuses on the role of doctorally prepared nurses in providing organizational and systems leadership. Leadership theories and frameworks serve as the foundation for situational analysis and development of a plan to lead change. |
| NSG 705 (online) | Advanced Lifespan Assessment | This course prepares the student to conduct comprehensive health assessment of patients of all ages and in complex situations. The processes of skilled communication and diagnostic reasoning are emphasized as the primary means of collecting, documenting, and analyzing data obtained from the patient history, physical examination, and diagnostic procedures. Emphasis is placed on the physical, developmental, functional, psychosocial, genetic, genomic, and cultural dimensions of the patients. The practice of new skills occurs in laboratory workshops where standardized patients and various simulation methods are available. |

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| NSG 706 (online) | Advanced Pathophysiology | This course provides an in-depth analysis of factors underlying pathophysiologic changes in selected acute and chronic diseases confronted in primary care adults and children. The student will develop understanding of pathological changes, which will be based on knowledge of normal physiology and physiological change across the lifespan. |
| NSG 707 (online) | Evidence Based Practice Methods | This course focuses on the use of research and epidemiological principles to guide the advanced practice nurse in the translation of research into practice, to design interventions to promote change in a variety of settings, and to understand methods to disseminate and integrate new knowledge into evidence-based practice. Students will use analytical methods to critique existing literature and practices against national benchmarks, design, implement, and evaluate outcomes of practice, and apply relevant findings to improved practice guidelines and healthcare outcomes. |
| NSG 710 (online) | Health Care Issues, Ethics, and Policy | This course prepares students who will perform at the highest levels of nursing practice. Students will examine the roles of the advanced practice and doctorally prepared nurse leaders in influencing policy development and implementation at a variety of levels (both macro and micro), considering the needs of multiple stakeholders, finance, regulation, and the need for social justice, equity, and quality of care. Ethical principles and personal values that shape professional practice and influence decision making will be expounded upon in the discussion of contemporary issues to allow critical analysis of the interaction between practice, research, and policy. |
| NSG 724 (online) | Health Research Statistics 1 | This course provides development of statistical knowledge and skills needed for quantitative health research. Topics include descriptive statistics, probability, hypothesis testing, analysis of variance, chi square, and regression techniques. |
| NSG 739 (online) | Scientific Underpinnings of the DNP Role | Integration of theories from nursing, the sciences, and the humanities to build a foundation for the preparation of students to fulfill the role of the advanced practice nurse at the highest level of nursing practice. |
| NSG 754 (online) | Transforming Health Care Through Information Technology | Utilization of information systems and technology to improve quality, safety, and system outcomes for the improvement and transformation of health care. |

| DNP Nurse Anesthesia Specialty Courses | | |
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| Course # | Course Name | Course Description |
| NSG 740A | Standards of Practice, Professionalism, and Overview of the Nurse Anesthesia Role | This course provides information and perspectives on the Doctor of Nursing Practice (DNP) Essentials, history of the nurse anesthesia profession, professional roles, wellness and the effects of substance use disorder, curricular standards, scope of practice, and regulatory authorities pertinent to nurse anesthetists. |
| NSG 740B | Professional Issues in Nurse Anesthesia | 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 | 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 | Core anesthesia principles of preoperative assessment, monitoring, positioning, basic airway and fluid management, and administration and documentation of basic and safe anesthetics for adults are discussed in this course. Students will have the knowledge to prepare for workshops associated with NSG 743 and for clinical practicum, NSG 752A. |
| NSG 742B | Foundations of Anesthesia 2: Regional Anesthesia and Considerations for Common Procedures | This course addresses basic anesthesia principles for safe administration of regional anesthesia. Students are introduced to anesthesia considerations for patients across the lifespan, including pediatric and geriatric patients, and will examine management fundamentals for common surgical subspecialty procedures. |
| NSG 743 | Foundations of Anesthesia Lab | This course develops the necessary psychomotor and critical thinking skills to provide safe anesthesia care in clinical settings. Workshops include conducting a preanesthetic assessment, preparing the anesthesia workspace and gas machine, managing the airway, obtaining vascular access, monitoring, positioning, preparing anesthetic medications, and managing complications that arise during anesthetic inductions. |

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| NSG 744A | Advanced Anatomy, Physiology, Pathophysiology 1: Cardiac, Pulmonary, and CNS | The focus of this course is to address 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 | 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 | This course applies principles of pharmacology to 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 | Students in this lab course apply principles of advanced assessment to nurse anesthesia practice. Comprehensive health history, in-depth physical 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 | 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: Obstetrics, Pediatrics, and Pain Management | 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: Trauma, Transplant, and Special Populations | 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. |
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| NSG 749 | Business, Management, and Finance in Nurse Anesthesia Practice | 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 | 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 Nurse Anesthesia Program. |
| DNP Nurse Anesthesia Clinical Practicum Courses | | |
| Course # | Course Name | Course Description |
| NSG 752A | Foundations Clinical Practicum 1 | This initial clinical practicum course is designed to integrate basic anesthesia principles into practice. The student will be introduced to anesthesia monitoring, procedures, technology, equipment, medications, and the perioperative clinical environment. |
| NSG 752B | Foundations Clinical Practicum 2 | This second clinical practicum course is designed to increase the integration of basic anesthesia principles into clinical practice. The student will continue to develop skill with anesthesia monitoring, use of equipment, administration of medications, and gain greater experience in anesthesia management of uncomplicated surgical procedures and regional anesthesia in the perioperative clinical environment. |

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| NSG 753A | Advanced Clinical Practicum 1 | 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 | 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 | 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 | 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 | 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 | | |
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| Course # | Course Name | Course Description |
| NSG 830 (online) | DNP Project Development | This course provides the Doctor of Nursing Practice (DNP) student with a framework for developing an evidence-based DNP project. Types of projects include quality improvement, policy analysis, demonstration, clinical inquiry, translation of evidence-based practice, and program evaluation. The student applies principles of business, finance, economics, and health policy to address a specific problem. |
| NSG 831 (online) | DNP Project Implementation | This course provides the Doctor of Nursing Practice (DNP) student with a framework for implementing and evaluating the outcomes of a proposed DNP project. The student will present a project proposal, apply for institutional approval, implement an initiative, and collect and analyze data in preparation for the DNP Project presentation. |
| NSG 832 (online) | DNP Project Presentation | This course requires the Doctor of Nursing Practice (DNP) student to present the DNP project. The student will demonstrate mastery of the DNP Essentials and DNP program outcomes through a portfolio, a presentation of the project, and a manuscript describing the project. |