Doctor of Nursing Practice Nurse Anesthetist, D.N.P.

Degree Offered
- Doctor of Nursing Practice

Nature of the Program

DESCRIPTION

The DNP Nurse Anesthetist Program prepares registered nurses to become certified registered nurse anesthetists (CRNAs) through a rigorous, challenging curriculum based on the Standards of Accreditation from the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) and the DNP Essentials of the American Association of Colleges of Nursing (AACN). Only offered as a full-time program, students are required to take 88 credits over 3 years or 9 continuous semesters. The program received a five-year initial accreditation from the COA effective October 9, 2019.

Nurse anesthesia practice covers the continuum of care from pre-operative assessment to discharge from the recovery unit. Nurse anesthetists interview and assess each patient to best formulate and implement an individualized plan of care while collaborating with members of a multi-disciplinary healthcare team. The DNP Nurse Anesthetist Program prepares students through course work that develops knowledge and skill in anesthesia practice, translation and implementation of evidence to practice, improvement in health outcomes for diverse populations, and organizational leadership.

Courses are divided into four categories, including core DNP, anesthesia specialty, clinical practicum, and DNP project offerings. Core DNP courses are offered online and address foundations of nursing theory, assessment, pharmacology, statistics, evidence-based practice methods, health promotion, informatics, leadership, ethics, and health policy. Anesthesia specialty courses are face-to-face classes with online capabilities. They are heavily based in sciences including chemistry, physics, advanced anatomy, physiology, pathophysiology, pharmacology, and basic and advanced principles of anesthesia. Additional specialty courses present physical assessment and principles of business, management, and finance pertinent to anesthesia practice.

Clinical practicum begins in the third semester and provides the student the opportunity to integrate didactic content with application of state-of-the-art techniques in the provision of anesthesia care to patients in all risk categories and age ranges in a variety of health care settings. Students are required to administer a minimum of 650 anesthetics and complete over 2000 clinical hours; however, graduating WVU DNP student nurse anesthetists will likely exceed that minimum. DNP project courses are incorporated early in the curriculum to give the student and faculty time to develop a project question, perform a literature search, refine and implement an initiative, collect and analyze data, and write a manuscript. The DNP Project manuscript and a portfolio of course work will demonstrate a synthesis of the student’s efforts in the program and will lay the foundation for future clinical scholarly initiatives directed at improving health and organizational outcomes in nurse anesthesia practice.

The graduate will earn a DNP degree and be eligible to sit for the National Certification Exam (NCE). This is a board exam administered by the National Board of Certification and Recertification of Nurse Anesthetists (NBCRNA). Graduates who pass the Certification Exam become Certified Registered Nurse Anesthetists. Certified graduates have the opportunity to practice in traditional hospital operating suites; ambulatory surgical centers; offices of dentists, podiatrists and pain management specialists; or in a wide variety of settings including the U.S. military and Public Health Services. The Bureau of Labor Statistics projects that employment for Nurse Anesthetists will grow 31% by 2024. According to the most current American Association of Nurse Anesthetists (AANA) statistics, the mean total compensation for full time CRNAs is greater than $170,000.

ACCREDITATION INFORMATION

The WVU Nurse Anesthetist Program is accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) through October, 2024. The COA may be contacted by mail at 222 South Prospect Ave., Park Ridge, IL 60068-4001; by phone at 847-655-1160; or on the web at www.coacrna.org.

The WVU School of Nursing DNP program is accredited by the Commission on Collegiate Nursing Education (CCNE). A 10-year renewed accreditation was confirmed in June, 2019 and is effective through June, 2029.

Admissions

DNP NURSE ANESTHETIST ADMISSION CRITERIA

Qualifications to apply to the WVU DNP Nurse Anesthetist program include:

- Degree of Bachelor of Science in Nursing from a nationally-accredited nursing program and regionally accredited institution.
- Minimum nursing GPA of at least a 3.0 on a 4.0 scale.
- Cumulative GPA of a 3.0 on a 4.0 scale on all college work attempted.
- Completion of 3 credits of undergraduate applied statistics (ie. STAT 211) with a minimum grade of a C or better prior to the first day of classes.
- Minimum of 1-year post-orientation, and preferably 2-3 years of current, full-time critical care experience.
Doctor of Nursing Practice Nurse Anesthetist, D.N.P.

- Employment in telemetry, cardiac catheterization lab, operating room, post-anesthesia care unit, interventional radiology, or emergency department is not considered critical care experience.
- Certification in basic, advanced cardiac, and pediatric advanced life support prior to the first day of classes.
- Current, unrestricted RN license. (Licensure in West Virginia will be required during the program and possibly one or more of the following states: Maryland, Ohio, and/or Pennsylvania.)

Applicants must submit official transcripts from all degree programs of attendance, a curriculum vitae/resume, 3 letters of recommendation (Professor/Faculty Member, Supervisor/Employer responsible for your annual performance review, and a professional colleague, physician or CRNA), and an application fee by the specified deadline. It is also strongly recommended that students shadow a CRNA prior to applying to the program.

Competitive applicants will be invited for an on-campus interview. Applicants will not be admitted without an interview. Admission into any graduate program is granted on a competitive basis and students meeting minimum requirements may be denied admission based on such factors as program capacity or academic discretion.

Notes: To be considered, applicants must meet all WVU admission requirements (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2022-2023/first-time-graduate-applicant/#anchor-gpa), in addition to program specific admission criteria. Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at https://nursing.hsc.wvu.edu. Any student who has been dismissed from the West Virginia University School of Nursing will not be readmitted to the program.

Application Process

Complete two application forms as indicated below and return to the appropriate offices by the deadline.

   - On the Supplemental Materials screen, you will upload the following:
     - Current curriculum vita or resume
     - Professional goals statement. View the guidelines on writing the essay on the School of Nursing website.
   - Applicants must also provide three letters of recommendation (Professor/Faculty Member, Supervisor/Employer responsible for your annual performance review, and a professional colleague, physician or CRNA). You will list your references, with their email addresses, on the Recommendations screen. Your references will receive an email from the application vendor with an electronic form. They will also need to upload a letter of recommendation.

2. Supplemental Application for the DNP Nurse Anesthetist Program (available at: https://nursing.hsc.wvu.edu/students/graduate-programs/dnp-nurse-anesthetist (https://nursing.hsc.wvu.edu/students/graduate-programs/dnp-nurse-anesthetist/))

3. Request an official transcript of records from each college or university attended.
   a. It is preferred that official transcripts be sent via an online, secure service such as eScrip-Safe (https://escrip-safe.com/signup/), National Student Clearinghouse (https://studentclearinghouse.org/), or Parchment (https://www.parchment.com/) to graduateadmissions@mail.wvu.edu.
   b. Alternatively, sealed, untampered, physical official transcripts can be sent directly to WVU Graduate Admissions, P.O. Box 6510, Morgantown, WV 26506-6510.
   c. Applicants who completed prior education outside of the U.S. must have their transcripts evaluated by World Education Services (WES) (https://www.wes.org/evaluations-and-fees/education/graduate-admissions/). Please request a “course-by-course” International Credential Advantage Package (ICAP).

For more information, visit the website at https://nursing.hsc.wvu.edu, write to West Virginia University School of Nursing, P.O. Box 9600, Morgantown, WV 26506-9600; or call (304) 293-1386.

Admission Requirements 2023-2024

The Admission Requirements above will be the same for the 2023-2024 Academic Year.

Major Code: 8625

Degree Requirements

A minimum cumulative GPA of 3.0 is required for the degree.

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<tr>
<th>Course Code</th>
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<td>Advanced Pharmacotherapeutics</td>
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<td>Advanced Lifespan Assessment</td>
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<td>Evidence Based Practice Methods</td>
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<td>Health Care Issues, Policy, and Ethics</td>
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<td>Health Research Statistics 1</td>
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<td>Scientific Underpinnings of the DNP Role</td>
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<td>Standards of Practice, Professionalism, and Overview of the Nurse Anesthesia Role</td>
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<td>Genetics, Chemistry, and Physics of Anesthesia</td>
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<td>Foundations of Anesthesia 1: Basic Principles of Safe Anesthesia Care</td>
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<td>Foundations of Anesthesia 2: Regional Anesthesia and Considerations for Common Procedures</td>
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<td>Advanced Anatomy, Physiology, and Pathophysiology 1: Cardiac, Pulmonary, and CNS</td>
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<td>Advanced Anatomy, Physiology, and Pathophysiology 2: Hepatic, Renal, and Related Systems</td>
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<td>NSG 746</td>
<td>Advanced Pharmacology for Nurse Anesthetists</td>
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<td>Perioperative Assessment and Care</td>
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<td>Advanced Principles of Anesthesia 1: Cardiothoracic, Vascular, and Neuroanesthesia</td>
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<td>Business, Management, and Finance in Nurse Anesthesia Practice</td>
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<td>NSG 753C</td>
<td>Advanced Clinical Practicum 3</td>
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<td>NSG 754</td>
<td>Transforming Health Care Through Information Technology</td>
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<td>Nurse Anesthesia Clinical Immersion 1</td>
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### Suggested Plan of Study

#### First Semester  
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Total credit hours: 88

**Progression and Performance Standards**

To progress in the graduate curriculum, a Nurse Anesthetist Program student must meet the following performance standards. Failure to meet the criteria below will result in dismissal from the program.

1. Maintain an overall academic Grade Point Average of at least 3.0 in all work attempted in the DNP Nurse Anesthetist Program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.

2. Earn a letter grade (A, B, C, or Pass) on all required courses. A grade of F or Fail in any course results in dismissal from the program.

3. Carry forward only one C grade in a core DNP nursing course. A second C in a core DNP nursing course will result in dismissal from the program. A student earning below a B- grade in any anesthesia specialty course must repeat the course. This means the student will fall out of progression with the current cohort and must wait until the course is offered in the next academic year.
4. Repeat only one course in the DNP Nurse Anesthetist progression plan and only one time.

5. Students may withdraw from only one course (resulting in a "W" on the academic transcript), and only one time.

If a student needs to withdraw from all courses in a semester, the student must meet with his or her faculty advisor. See program handbook for Leave of Absence and Withdrawal policies at https://nursing.wvu.edu/students/resources/student-handbooks/?url=https%3A%2F%2Fnursing.wvu.edu%2Fstudents%2FResources%2FStudent-handbooks%2F&data=04%7C01%7Caaron.ostrowski%40hsc.wvu.edu%7C137a21e4a5f47a48e9808d8decde218%7Ca2d19f1851044248ae15c596b2b578%7C0%7C0%7C837520124113567884%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&data=vntsWc7nYZ0wqNqVQxY9Q1DEIRvz6tPKf5zzC0Wmos%3D&reserved=0).

Grading Scale

The grading scale for nursing as posted in each course syllabus is:

A = 93-100, B = 85-92, C = 77-84, F = 76 and below.

Doctor of Nursing Practice in Nurse Anesthesia Learning Outcomes

Upon completion of the Nurse Anesthetist Program, the graduate will be prepared to:

1. Implement advanced knowledge in nurse anesthesia science, theory, and practice.
2. Evaluate, develop, implement, and lead organizational change to improve care delivery and quality.
3. Develop evidence-based interventions and implement solutions to address clinical problems.
4. Examine and evaluate technology and the utility of information systems and data to improve patient care.
5. Influence and participate in health policy development in the institution and region of practice.
6. Collaborate with the healthcare community, working with nursing, medical, surgical and anesthesia team members to promote patient advocacy and safety.
7. Demonstrate technical, professional, and cultural competence in nurse anesthesia practice by safely caring for patients across the lifespan and at all levels of acuity.
9. Participate in the clinical, administrative, and educational advancement of fellow CRNAs and other advanced practice practitioners.

COURSES

NSG 593. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

NSG 600. Financial Management in Healthcare Organizations. 3 Hours.
This course introduces concepts of economics and financial management for health care professionals. Course content includes principles of economics, fundamentals of managed care and health reform, budgets and budget preparation, financial analysis, preparation of business plans and health program grant proposals, and issues relevant to international settings and future trends.

NSG 611. System Based Decision Making. 2 Hours.
PR: NSG 616. Decision making grounded in an understanding of the organization as an open living system.

NSG 616. Role Seminar for Leadership MSN. 2 Hours.
Exploration, analysis, and evaluation of the role of the master's prepared nurse in leadership positions as guided by concepts, theories, and research.

NSG 617. Leadership Practicum 1. 3 Hours.
Supervised practicum designed to apply healthcare leadership principles to practice. Students participate in nursing leadership and administrative activities in a selected healthcare setting.

NSG 618. Leadership Practicum 2. 3 Hours.
PR: NSG 617. Supervised practicum designed to build on initial application of healthcare leadership principles. Students participate in leadership and administrative activities in a selected health care setting.

NSG 622. Theory and Disciplined Reasoning. 3 Hours.
Introduction to the theoretical foundations of the discipline of nursing as a basis for applying disciplined reasoning to advanced practice.

NSG 623. Advanced Practice Role & Interprofessional Collaboration. 3 Hours.
Exploration of the concepts, theories, and research that guide the advanced practice nursing role. This foundational course introduces students to the knowledge, skill, and behavioral expectations of the nurse in an advanced practice role, including interprofessional collaboration.

NSG 625. Statistics. 3 Hours.
This course provides an introduction to the collection and analysis of nursing and health sciences data. Topics include sampling, data presentation, summary measures, probability, confidence interval, hypothesis testing, t-test and ANOVA, correlation analysis, simple/multiple linear regression, chi-square test, power and sample size calculation.
NSG 626. Lifespan Health Promotion. 3 Hours.
PR or CONC: NSG 622 and NSG 623. An in-depth study of theoretical foundations, epidemiological principles, and advance practice strategies for the promotion of health and prevention of disease across the life-span.

NSG 627. Evidence Based Practice. 3 Hours.
PR or CONC: NSG 625. An analysis of the application of research to guide the advanced practice nurse in evidence-based nursing practice.

NSG 628. Leadership/Policy/Ethics. 3 Hours.
PR: NSG 627. An exploration of the concept of leadership in the advanced practice role and application of these leadership behaviors to health care policy and ethical decision making.

NSG 691. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

NSG 693. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

NSG 695. Independent Study. 1-9 Hours.
Faculty supervised study of topics not available through regular course offerings.

NSG 697. Research. 1-9 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper, or equivalent scholarly project, or a dissertation guided by a student-graduate faculty contact based on the course objectives and culminating in a written product. (Grading will be S/U.)

NSG 700. Advanced Pharmacology Pediatric Focus. 3 Hours.
PR: NSG 706. Examination of the relationship between pharmacologic principles and the selection of pharmacologic agents in altered health states across the lifespan. This course lays the foundation for subsequent courses in diagnosis, management, and therapeutic interventions.

NSG 701. Advanced Pharmacotherapeutics. 3 Hours.
PR: NSG 706. Examination of the relationship between pharmacologic principles and the selection of pharmacologic agents in altered health states across the lifespan. This course lays the foundation of subsequent courses in diagnosis, management, and therapeutic interventions.

NSG 702. Population Health Promotion. 3 Hours.
In depth study and analysis of clinical prevention and population health for individuals, aggregates, and populations utilizing advanced nursing practice and program evaluation strategies for the promotion of health and prevention of disease across populations.

NSG 703. Theoretical Foundations of Nursing Practice. 3 Hours.
Elaboration and integration of theories from nursing, the sciences, and the humanities to build a foundation for the highest level of nursing practice.

NSG 704. Health Care Leadership. 3 Hours.
Critical analysis of leadership in an organizational setting, with development of skills needed to enact the leadership role.

NSG 705. Advanced Lifespan Assessment. 3 Hours.
PR: NSG 706. The focus of this course is the advanced health assessment of individuals across the lifespan. Skilled interviewing and advanced assessment skills are emphasized.

NSG 706. Advanced Pathophysiology. 3 Hours.
Theoretical basis of pathophysiologial changes in acute and chronic illnesses confronted in primary care across the lifespan is presented. The course serves as the foundation for clinical assessment, decision making, and management.

NSG 707. Evidence Based Practice Methods. 3 Hours.
PR: NSG 724. This course provides an overview of research methods, evidence, and epidemiologic measures for understanding the translation of research into practice and the design of interventions to promote change in a variety of settings.

NSG 709. Health Care Informatics. 3 Hours.
Explore information technologies used in point-of-care inpatient and outpatient health settings and describe methods of utilization of technology for practice improvement, quality, and safety.

NSG 710. Health Care Issues, Policy, and Ethics. 3 Hours.
A foundation for leadership in health policy development, implementation, and evaluation, with a focus on advocacy for nursing, leadership, ethics, finance, and policy/program implementation.

NSG 712. Primary Care of Families 1. 3 Hours.
PR: NSG 701 and NSG 705. An introduction to the knowledge and skills basic to the health maintenance, diagnosis, treatment, evaluation, and revision of care of individuals as members of family units in the primary care setting.

NSG 714. Primary Care of Families 2. 3 Hours.
PR: NSG 712. Further acquisition of knowledge and skills basic to the health maintenance, diagnosis, treatment, evaluation, and revision of care of individuals as members of family units in the primary care setting. The change in course hours reflects change in content.

NSG 717. Organization and Leadership. 3 Hours.
Provides a foundation for developing organizational and systems leadership skills critical to clinical care and health outcomes. Knowledge will help students to promote patient safety and excellence in health care organizations.
NSG 719. Health Care Policy. 3 Hours.
Provides a foundation for influencing, developing, implementing, and evaluating health care policies and legislation pertinent to issues in health care such as ethics, safety, costs, access, and quality.

NSG 720. Family Practicum 1. 5 Hours.
PR: NSG 712 and PR or CONC: NSG 714. Supervised practicum designed to facilitate the student's competency at the advanced practice level in the delivery of primary health care across the lifespan.

NSG 721. Family Practicum 2. 5 Hours.
PR: NSG 720. Supervised practicum that builds upon Family Practicum 1 and applies theory and evidence to the advanced practice of nursing. Further role and competency development at the advanced practice level of lifespan primary health care.

NSG 722. Topics in Global Health: Honduras. 2 Hours.
PR or CONC: NSG 720 or 721. Students are introduced to global health concepts through immersion in the culture of Honduras and utilize disciplined reasoning in the application of therapeutics and evidence-based advanced nursing practice in service learning experiences.

NSG 724. Health Research Statistics 1. 3 Hours.
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 725. Health Research Statistics 2. 3 Hours.
This course continues the development of statistical knowledge and skills needed for quantitative health research using SPSS, including nonparametric testing, advanced regression topics and diagnostics, ANCOVA, SPSS syntax, classification, and factor, survival and power analyses.

NSG 727. Contemporary Nursing Science. 3 Hours.
Focus is on an analysis of the state of the science for a phenomenon for study. Emphasis is placed on the application of the particular phenomenon to a population of interest.

NSG 728. Nursing Science Theory/Philosophy. 4 Hours.
This course builds on philosophical basis of nursing. Discovery and verification of scientific knowledge are addressed by focusing on theory development. Methodologies include concept analysis and evaluation of middle-range theories of nursing and related sciences.

NSG 729. Quantitative Methods. 3 Hours.
PR: (NSG 724 and NSG 725) with a minimum grade of B-. Quantitative methods and measurement relevant to conducting research in nursing are studied.

NSG 731. Qualitative Research Methods. 3 Hours.
PR: NSG 728. An exploration of the philosophical foundation and methods of qualitative inquiry. Research designs, ethical issues, rigor, integrity, data collection, interpretation, and representation are studied in depth.

NSG 732. Seminar in Nursing Scholarship. 3 Hours.
PR: Admission to the PhD program. Exploration of the dimensions of scholarship in preparation for future roles as nurse scholars/scientists.

NSG 733. Research Grant Development. 3 Hours.
PR: NSG 729 and NSG 731. Analysis of the grant-writing process, including project goals and objectives, description, methodology, design, personnel, budget, and evaluation. In addition, current federal application formats will provide students with the background to complete a submittable grant proposal in their own area of research.

NSG 734. Use of Data. 3 Hours.
PR: NSG 724 and NSG 725 and NSG 729. This course focuses on use of the following data bases: clinical, financial, health services, nursing, local, state, and national. The uses of existing data in clinical and policy decisions and in research will be explored.

NSG 735. Principles: Nursing Education. 3 Hours.
This course examines the research base of educational strategies in nursing education in classroom and clinical settings. The course also examines external determinants on nursing curriculum, accreditation issues, and evaluation of nursing programs.

NSG 736. Advanced Health Policy and Ethics. 3 Hours.
PR: NSG 732. Examination of ethical issues of research and current health policy.

NSG 737. Leadership. 3 Hours.
PR: NSG 732. Through exploration of contemporary leadership theory and application to self, an authentic personal leadership style will be developed to enable the student to enact a leadership role in health care and/or education.

NSG 739. Scientific Underpinnings of the DNP Role. 3 Hours.
Integration of theories from nursing, the sciences, and the humanities to build a foundation for preparation of students to fulfill the role of the advanced practice nurse at the highest level of nursing practice.

NSG 740A. Standards of Practice, Professionalism, and Overview of the Nurse Anesthesia Role. 2 Hours.
This course provides information and perspectives on the Doctor of Nursing Practice (DNP) Essentials, history of the nurse anesthesia profession, informatics, 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. 2 Hours.
PR: NSG 740A with a minimum grade of B-. 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. Genetics, Chemistry, and Physics of Anesthesia. 3 Hours.
PR: NSG 706 with a minimum grade of C-. 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 Hours.
PR: NSG 741 and PR or CONC: NSG 743 and NSG 752A with a minimum grade of B- in each. 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. 2 Hours.
PR: NSG 742A with a minimum grade of B-. 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. 1 Hour.
PR or CONC: NSG 742A and NSG 752A with a minimum grade of B- in each. 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.

NSG 744A. Advanced Anatomy, Physiology, and Pathophysiology 1: Cardiac, Pulmonary, and CNS. 3 Hours.
PR: NSG 742A with a minimum grade of B-. 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. 2 Hours.
PR: NSG 744A with a minimum grade of B-. 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 745. Clinical Immersion. 1-5 Hours.
PR: NSG 739 and at least one credit of clinical immersion must occur during the last year of the student's program of study. In this course, students will use the knowledge gained from core and specialty courses at a high level of complexity in clinical practice. This will include integrating the DNP Essentials (AACN, 2006) in leadership-oriented clinical practice experiences.

NSG 746. Advanced Pharmacology for Nurse Anesthetists. 3 Hours.
PR: NSG 701 with a minimum grade of C- and NSG 742A with a minimum grade of B-. 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. 1 Hour.
PR: NSG 705 with a minimum grade of C- and NSG 742B with a minimum grade of B-. 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. 3 Hours.
PR: NSG 742B and NSG 744A with a minimum grade of B- in each. 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. Advanced Principles of Anesthesia 2: Management Across the Lifespan. 3 Hours.
PR: NSG 748A with a minimum grade of B-. 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. 2 Hours.
PR: NSG 748B with a minimum grade of B-. Advanced principles of anesthetic management including patients of 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 in this course.
NSG 749. Business, Management, and Finance in Nurse Anesthesia Practice. 3 Hours.
PR: NSG 704 with a minimum grade of C- and NSG 740B with a minimum grade of B-.
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. 3 Hours.
PR: NSG 749 and NSG 810 with a minimum grade of B- in each. 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 write a summative Comprehensive Exam and participate in an objective structured clinical exam based on the entire curriculum.

NSG 752A. Foundations Clinical Practicum 1. 1 Hour.
PR or CONC: NSG 742A and NSG 743 with a minimum grade of B- in each. 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. 2 Hours.
PR: NSG 752A and PR or CONC: NSG 742B with a minimum grade of B- in each. 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.

NSG 753A. Advanced Clinical Practicum 1. 2 Hours.
PR: NSG 752B and PR or CONC: NSG 748A with a minimum grade of B- in each. 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 Hours.
PR: NSG 753A and PR or CONC: NSG 748B with a minimum grade of B- in each. 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. 2 Hours.
PR: NSG 753B and PR or CONC: NSG 748C with a minimum grade of B- in each. 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 754. Transforming Health Care Through Information Technology. 3 Hours.
Utilization of information systems and technology to improve quality, safety, and system outcomes for the improvement and transformation of health care.

NSG 755. Acute Care Professional Role Development. 1 Hour.
This course is designed to explore, analyze, and compare and contrast the role of the previously certified primary care advance practice registered nurse who seeks to gain additional knowledge and skills related to the care of adult-gerontology acutely ill patients.

NSG 756. Intro to Acute Care Practicum. 1 Hour.
PR: NSG 755 and NSG 758. This course helps prepare the AGACNP student for entry into the clinical practicum setting as an advanced practice provider. It offers an introduction to skills and competencies essential to the practicing AGACNP.

NSG 757. Acute Care Practicum. 1-10 Hours.
PR: NSG 755 and NSG 758 and PR or CONC: NSG 759. This supervised practicum is designed to facilitate the student’s competency in the delivery of acute care to adult and geriatric patients.

NSG 758. Acute Care 1. 5 Hours.
PR: NSG 755. This course is designed for the previously certified primary care advance practice registered nurse who seeks to gain additional knowledge and skills related to the care of adult-gerontology acutely ill patients.

NSG 759. Acute Care 2. 5 Hours.
PR: NSG 755 and NSG 758. This course builds upon the knowledge and concepts presented in Acute Care 1. It is designed for the previously certified primary care advance practice registered nurse who seeks to gain additional knowledge and skills related to the care of adult-gerontology acutely ill patients.

NSG 763. DNP Project. 1-6 Hours.
PR or CONC: NSG 760. Implementation of a capstone project using leadership skills to create and evaluate change relative to a practice problem. Analysis of the relationship of the project to practice and policy.

NSG 767. Advanced Lifespan Assessment: PNP Focus. 3 Hours.
PR: NSG 706. Advanced health assessment of individuals across the lifespan with focus on pediatric populations. Skilled interviewing and clinical reasoning are emphasized as students collect and analyze data from the patient history, physical examination and diagnostic procedures.
NSG 768. Prospectus Development. 1-6 Hours.
Supervised experiences in planning the dissertation research project, developing the chapters for the prospectus, and preparing the proposal document for review by committee members.

NSG 770. Pediatric Primary Care 1. 3 Hours.
PR or CONC: NSG 767. An introduction to the knowledge and skills basic to the health maintenance, diagnosis, treatment, evaluation and revision of care of children in the primary care setting.

NSG 771. Pediatric Primary Care 2. 3 Hours.
PR: NSG 770. Further acquisition of knowledge and skills central to the assessment of health status, diagnosis, treatment and evaluation of children in the primary care setting.

NSG 772. Pediatric Practicum 1. 5 Hours.
PR or CONC: NSG 771. Supervised practicum designed to facilitate the student's competency in the delivery of primary health care to children.

NSG 773. Pediatric Practicum 2. 5 Hours.
PR: NSG 772. Supervised practicum that builds on NSG 772 [Pediatric Practicum 1] and applies theory and evidence to the advanced practice of nursing. Further role and competency development at the advanced practice level for the delivery of primary health care to pediatric populations.

NSG 774. Neuro-Psychopharmacology. 3 Hours.
PR: Admission to the PMHNP Program. Students will focus on principles of neurobiology including neurodevelopment, neuroanatomy, neurophysiology, neurochemistry, and advanced theories in the neuroscience of psychiatric illnesses. Psychopharmacologic agents, their clinical uses in psychiatric illness, pharmacodynamics, and pharmacogenomics will be reviewed in depth. Students will learn to synthesize information through a case-based method related to psychopharmacological treatment of mental disorders across the lifespan.

NSG 775. PMHNP Role and Foundations. 3 Hours.
PR or CONC: NSG 774. The focus of this course is on the scope and standards of practice and prescriptive authority for the PMHNP. Students will obtain an overview of the classification system in the DSM-5, an introduction of psychiatric disorders, and levels and standards of the PMHNP role, including the Standards of Professional Performance for the PMHNP.

NSG 776. Psychotherapy Modalities. 3 Hours.
PR or CONC: NSG 774 and NSG 775. This course will provide students with a comprehensive exploration of selected evidence-based psychotherapeutic concepts, modalities, and interventions for individuals, families, and groups across the lifespan. Students will learn to integrate various psychotherapeutic approaches into a model that will guide their practice. The clinical practicum allows the student to integrate assessment skills and psychotherapeutic interventions into the clinical environment.

NSG 777. PMHNP Management of Adults. 3 Hours.
PR: NSG 774 and PR or CONC: NSG 775 and NSG 776. This course focuses on the knowledge, skills, and attitudes required to perform advanced clinical differential diagnoses and management of adults and geriatrics with mental health disorders utilizing the diagnostic criteria of the DSM-5. Students will learn to apply the principles of psychopharmacology and psychotherapies to the care of adults of all ages.

NSG 778. PMHNP Clinical Practicum 1. 3-5 Hours.
PR: NSG 774 and NSG 775 and NSG 776 and PR or CONC: NSG 777. This clinical course allows students to practice the knowledge, skills, and attitudes attained in foundational PMHNP courses. It focuses on the application of neuro-psychopharmacology, assessment, and psychotherapeutic treatment. Students perform advanced clinical differential diagnoses and management of adults with mental health disorders utilizing the diagnostic criteria of the DSM-5.

NSG 779. PMHNP Management of Child/Adolescent. 3 Hours.
PR: NSG 777. This course focuses on the knowledge, skills, and attitudes required to perform advanced clinical differential diagnoses and management of children and adolescents with mental health disorders evolving from the diagnostic criteria of the DSM-5. Students will also learn to apply principles of psychopharmacology and psychotherapies to the care of children and adolescents.

NSG 780. PMHNP Clinical Practicum 2. 3-5 Hours.
PR: NSG 777 and NSG 778 and PR or CONC: NSG 779. This clinical course allows students to practice the knowledge, skills, and attitudes attained in foundational PMHNP courses. It focuses on the application of neuro-psychopharmacology, assessment, and psychotherapeutic treatments. Students perform advanced clinical differential diagnoses and management of patients across the lifespan with mental health disorders, utilizing the DSM-5 diagnostic criteria. Students will develop treatment plans that incorporate evidence-based interventions.

NSG 781. Research Mentorship. 1 Hour.
PR: NSG 785. In this guided practicum, the student's research skills are developed and cultivated through participation in the mentorship process with an experienced researcher (the chairperson or his/her designee).

NSG 783. Dissertation Seminar. 2 Hours.
PR: NSG 785. This seminar provides an opportunity for continued knowledge synthesis related to the selected topic of research. Students will participate in proposal presentation and critique.
NSG 785. Qualifying Examination. 1 Hour.
PR: Students must complete all courses except one cognate and NSG 781 and submit a first-authored manuscript relevant to the student's focused area of research to a peer-reviewed journal for publication prior to taking NSG 785. The Qualifying Exam (QE) allows students to demonstrate the ability to synthesize knowledge gained in coursework in order to be able to progress to dissertation. It is comprised of written and oral components. All elements of the QE must be successfully completed no later than the first semester of the fifth year.

NSG 791. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

NSG 792. Directed Study. 1-6 Hours.
Directed study, reading, and/or research.

NSG 793. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

NSG 795. Independent Study. 1-9 Hours.
Faculty supervised study of topics not available through regular course offerings.

NSG 796. Graduate Seminar. 1-3 Hours.
PR: Consent. Each graduate student will present at least one seminar to the assembled faculty and graduate student body of his or her program.

NSG 797. Research. 1-9 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper, or equivalent scholarly project, or a dissertation. (Grading will be S/U).

NSG 810. Nurse Anesthesia Clinical Immersion 1. 3 Hours.
PR: NSG 753C with a minimum grade of B-. 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. 3 Hours.
PR: NSG 810 with a minimum grade of B-. 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.

NSG 830. Doctor of Nursing Practice Project Development. 2 Hours.
PR: NSG 724 and PR or CONC: NSG 707. 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 the identified problem.

NSG 831. Doctor of Nursing Practice Project Implementation. 1,2 Hour.
PR: NSG 830. 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. Doctor of Nursing Practice Project Presentation. 2 Hours.
PR: NSG 830 (for 2 credits) and NSG 831 (at least 2 credits). 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.