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THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

DEADLINE: Feb 1st

COLLEGE OF NURSING

Masters of Science in Nursing - MSN **NURSE ANESTHESIA**

(Certified Registered Nurse Anesthetist)

The Nurse Anesthesia concentration will permit the graduate an opportunity to take his or her place among the ranks of the highly respected CRNAs who will be molding the health care history of our next century. If you are a highly capable and motivated professional, comfortable with the physical sciences, seeking increased education, autonomy and the beginning of a life-long period of challenge and continued learning, this program may be of interest to you.

The thirty-one month Nurse Anesthesia concentration curriculum offers professional registered nurses the opportunity to develop into safe, highly competent nurse anesthetists by providing a course of study that encourages lifelong learning in the practice of nurse anesthesia. Upon satisfactory completion of all didactic and clinical work, candidates are awarded the Master of Science in Nursing degree from the University of Tennessee. Qualified graduates will then be recommended to write the National Certification Examination and, upon successful completion, recognized as a Certified Registered Nurse Anesthetist (CRNA).

The curriculum contains didactic classes in the principles and practices of anesthesia (both general and regional) for all types of patients undergoing surgical and diagnostic procedures in all general surgery and specialty areas, including neuro, cardiovascular/thoracic, OB/Gyn, and pediatrics. Considerable course work is devoted to pathophysiology and pharmacology. Courses also cover the theoretical considerations of practice, professional issues and research. In preparation for the clinical anesthesia practicum that begins in your first year of study and continues throughout the remainder of the program, all students will be exposed to numerous simulation exercises in the Human Anesthesia Simulation Laboratory (HASL). Students begin to administer anesthesia in the clinical area under constant supervision.

The goal of the Nurse Anesthesia Concentration is to prepare qualified registered nurses to become anesthesia practitioners with an advanced scientific knowledge base and a comprehensive array of clinical skills. Graduates should be able to:

1. Competently prepare and deliver nurse anesthesia services throughout the spectrum of practice settings in order to meet the health care needs of the public.
2. Conduct independent study and research in support of advancement of the profession.
3. Participate in the clinical and didactic components of nurse anesthesia educational programs.
4. Assume professional leadership roles at the local, state, and national levels.

Is this a
distance –
education
program?

Classroom Environment

The Nurse Anesthesia concentration is a blended curriculum. Specifically, classes include both on campus and online activities. However, this is not an online program.

Can I work
full-time &
take classes?

Program of Study Schedule

As is the case with all graduate programs of nurse anesthesia education, our curriculum is very demanding and academically rigorous. Due to the intensity and workload of the graduate curriculum and practicum, students are discouraged from working. If students elect to work part-time, they may do so as long as academic and clinical performance are not compromised.

Can I choose my clinical site?

The primary clinical site for the program is the University of Tennessee Medical Center in Knoxville, a 581-bed Acute Care Teaching Hospital and a Level-I Adult and Pediatric Trauma Center, which offers a wide range of clinical experiences to student registered nurse anesthetists. Additionally, the following clinical facilities are utilized for curricular enrichment and supplementation: East Tennessee Children's Hospital, Fort Sanders Regional Medical Center, Parkwest Medical Center and Methodist Medical Center of Oak Ridge. Our students average 1,100 cases throughout the Nurse Anesthesia program of study which is double the minimum amount that is required to sit for the National Certification Examination.

What is HASL?

In preparation for the clinical anesthesia practicum that begins Fall semester of your first year of study and continues throughout the remainder of the program, all students will be exposed to numerous simulation exercises in the Human Anesthesia Simulation Laboratory (HASL). Students begin to administer anesthesia in the clinical area under constant supervision. A supervised call experience begins in October of the third semester.

Admission Process

The Nurse Anesthesia concentration is part of the College of Nursing MSN graduate program and follows the standard admission process and cycle. Application deadline is in the Spring (**February 1st**) for the following Spring cohort (program begins in January).

Requirements

Applicants for the Nurse Anesthesia concentration must meet the following admission requirements:

- Submit online application to Graduate Admissions Office. Meet all admission requirements of the Graduate School & the College of Nursing.
- Achieve a TOEFL score of at least 550 on the paper test or 80 on the Internet-based Test if native language is not English.
- Hold a bachelor's degree in nursing (Bachelor of Science in Nursing) from a regionally accredited program.
 - Have an undergraduate GPA of 3.0 or higher on a 4-point scale.
 - NEW (Effective April 2013)– Only applicants with a cumulative GPA of less than 3.3 must take the Graduate Record Examination (GRE) and achieve a competitive score in the verbal and quantitative sections. {A minimum combined score of 297 or greater on the two sections suggested.} *Note: No other examinations, such as the MAT, GMAT, LSAT or MCAT, are accepted.*
 - Have completed an undergraduate-level health assessment course.
- Hold or be eligible for licensure to practice nursing in Tennessee or compact state.
- Current Advanced Cardiac Life Support (ACLS) & Pediatric Advanced Life Support (PALS) certification.
- Have completed 3 hours of graduate-level statistics. Most applicants do not concern themselves with this until they are admitted. Most entering students simply take the College of Nursing graduate-level statistics course that is offered in the Fall term [N511] or Stat 531 offered through Haslam College of Business and are then ready for Spring term start. *NOTE: This criterion must be completed prior to the start of classes in January.* If you choose to take the stats course at another university, you must submit a copy of the course syllabus to the College of Nursing for pre-requisite approval. Course equivalency waiver is authorized at the discretion of the Director of Nursing Graduate Studies.
- 3-5 page typed essay addressing the applicant's long-range professional and educational goals, preparation (including your work experiences) for anesthesia education, and qualities that would make the applicant a good candidate for a career in Nurse Anesthesia.
- A personal interview by the Selection Panel at the University of Tennessee, College of Nursing, Nurse Anesthesia Concentration.
- Three (3) rating forms (references) from the following: 1) a former nursing professor that is familiar with the applicant's academic work 2) an immediate work superior (i.e. nurse manager) 3) a physician who works directly with the applicant

Please note: Rating forms will not be accepted from the following: *medical residents, fellows, clinical preceptors, team leaders and/or clinical nursing/unit educators.*

***Credit transfer:** A maximum of 9 graduate hours taken before acceptance into the Master's program may be applied toward the degree (does not include statistics course pre-requisite); none may be clinical. Transferred courses must have been completed within the six-year period prior to receipt of the degree.

Additional Requirements

ICU Experience – To be considered for admission, applicants must have completed at least one year of current, full-time adult critical care nursing experience prior to the start of the program. Applicants must be able to demonstrate critical thinking skills and feel comfortable working with ventilators, numerous vasoactive drugs, such as nitro glycerin, nitroprusside, dopamine and amiodarone. In addition, applicants must possess a thorough understanding of EKG interpretation and be able to apply hemodynamic values to patient care. Some examples of adult critical care areas that meet this requirement include (but are not limited to) the following:

- Surgical ICU
- Trauma ICU
- Cardiovascular ICU
- Medical ICU
- Coronary Care Unit

**Please note: Nursing experience in the ER, ICN, Pediatric ICU, or PAR does not fulfill this requirement.*

Experience in other intensive care units- While experience in adult critical care is required, employment time in neonatal and/or pediatric ICU is considered to be very advantageous and may count toward the minimum one-year critical care criterion. Other work history may be considered on a case-by-case basis, but must include experience in units where nurses care for high acuity, critically ill patients on a 1:1 ratio who require invasive monitoring and the administration of vasoactive drugs. For example, while it cannot supersede the critical care (ICU) requirement, Flight Nursing is considered highly complementary experience for applicants to the UT Knoxville Program.

CCRN Certification - While the program does not necessarily require applicants to have CCRN certification prior to application, admission will be contingent upon achieving this or similar professional milestone before matriculation. Other acceptable certifications include but are not necessarily limited to:

- Certified Nurse Operating Room (CNOR)
- Certified Post Anesthesia Nurse (CPAN)
- Certified Ambulatory Perianesthesia (CAPN)
- Certified Emergency Nurse (CEN)
- Certified Flight Registered Nurse (CFRN)

Acceptance Requirements

Applicants who are accepted to the Nurse Anesthesia concentration must confirm their placement by completing the following admission requirements:

- Before registering for classes, each student must submit a seat fee (\$2000) and successfully complete a criminal background and health status check, using our third party agency.
- Each student must hold personal health insurance.
- Registered nurses must be eligible to practice nursing in Tennessee, i.e., licensed in Tennessee or one of the interstate compact states.
- Each student must present proof of immunization/vaccine/titer for the following: hepatitis, MMR (measles, mumps, rubella), varicella, Tdap (tetanus, diphtheria, acellular pertussis), TB (tuberculin skin test), flu (due in October). Additionally, a health examination is required. Certain immunization waivers may be available.
- Each student must present evidence of current two-person CPR certification.
- Once classes begin, students must also have professional liability insurance (an automatic UT Bursar's bill of \$25/per year).

Tuition/Fee Estimate

Semester cost is based on UTK Graduate School tuition rates + other charges and fees (<http://onestop.utk.edu/your-money/tuition-fees/>) and dependent upon whether or not the student has enrolled in a Clinical Nursing course. Based on approved FY2015-16 figures, which are subject to change each term, the Clinical Nursing fee is currently \$200 per Clinical Nursing course.

*All Nursing Anesthesia courses are assessed a fee of \$575.

Please refer to page 12 of the Nurse Anesthesia Concentration Program booklet for additional program fees and costs: <http://gsm.utmck.edu/anesthesiology/documents/NAC%20Information%20-%20Rev%201-20-13.pdf>

Thesis Option

Students select either a thesis or non-thesis option. Students selecting the non-thesis option take three (3) hours of N582 and take a Comprehensive Final Examination. Students selecting the thesis option will take six (6) hours of N500 and the defense of their thesis serves as their Comprehensive Final Examination.

NURSE ANESTHESIA CONCENTRATION CURRICULUM SHOWCASE

Spring Semester I	Mini-term I:	Summer Semester I:	Fall Semester I:
N501 Nursing Research 3	N504 Adv Health/Physical Assessment 3	N524 Basic Principles of Anesthesia I 3	N525 Basic Principles of Anesthesia II 3
N510 Theories and Concepts 3		N505 Advanced Clinical Pharmacology 3	N526 Professional Issues in Nurse Anesthesia 2
N507 Health Policy & Promotion for APN's 4		N522 Integrated Health Science for Anesthesia 3	N544 Clinical Anesthesia Practicum I 4
N582 Scholarly Inquiry 3			
Total 13 hours	Total 3 hours	Total 9 hours	Total 9 hours

Spring Semester II:	Mini-term II:	Summer Semester II:	Fall Semester II:
N523 Advanced Principles of Anesthesia Practice 2	N546 Clinical Anesthesia Practicum III 2	N518 Advanced Pathophysiology: OB/Regional 2	N516 Advanced Pathophysiology: Neuro/CV 2
N506 Advanced Anesthesia Pharmacology 3		N547 Clinical Anesthesia Practicum IV 9	N548 Clinical Anesthesia Practicum V 10
N545 Clinical Anesthesia Practicum II 8			
Total 13 hours	Total 2 hours	Total 11 hours	Total 12 hours

Spring Semester III:	Mini-Term III:	Summer Semester III:	
N517 Advanced Pathophys: Resp/Renal 2	N583 Directed Clinical Practice 2	N583 Directed Clinical Practice 9	
N549 Clinical Anesthesia Practicum VI 10			
		** (and N500 @ 3hr for thesis option)	
		(will take comprehensive exams this semester)	
Total 12 hours	Total 2 hours	Total 9 hours	Total 95 hours/98 hours with thesis option

*Your actual plan of study and sequencing of coursework will be determined by mutual agreement of your academic advisor at the time you matriculate in the concentration.

Comprehensive Examination Requirements

All students must successfully complete a comprehensive examination as required by the Graduate Council. For thesis students, the comprehensive exam will consist of an oral defense of the thesis as well as other written or oral questions designed to measure student mastery of the entire program of study. For non-thesis students, the written examination will cover the entire program of study and may, at the discretion of the student's committee, be followed by an oral examination.

Course Descriptions

In addition to the core classes, the Nursing Anesthesia concentration includes the following:

N500 Thesis (3,3)

Utilization of the research process in an original scholarly inquiry using either quantitative or qualitative methods. Thesis hours are conducted under faculty guidance, and the completed thesis is prepared according to the University of Tennessee Guide for Thesis and Dissertations. NOTE: Student will register for this course twice in order to fulfill the hours requirement for Thesis. Students choosing the Thesis option DO NOT take N582, Scholarly Inquiry for Advanced Practice.

N506 Advanced Anesthesia Pharmacology (3)

Pharmacological implications of anesthesia delivery to acutely ill patients with multisystem influences. Advanced states of illness, extremes of age, and co-morbidities. Agents used in general anesthesia, regional anesthesia, IV regional anesthesia, acute pain management, and chronic pain management. Anesthetic implications of pharmacotherapy in perioperative patients. Prerequisite(s): 505

N516 Advanced Pathophysiology: Neurological & Cardiovascular with Anesthesia

Implications (2) Review of anatomy and physiology and integration of pathophysiology involved in patients requiring anesthetic care for cardiac surgical procedures (both children and adults) with and without cardiopulmonary bypass, intercranial surgical procedures for vascular and mass occupying lesions, patients requiring somatosensory evoked potential monitoring, and patients requiring anesthesia for non-cardiac and non-neurological procedures who present with either neurological and/or cardiovascular comorbidity. Prerequisite(s): 524 and 525; Corequisite(s): 523

N517 Advanced Pathophysiology: Respiratory/Renal with Anesthesia Implications

(2) Review of anatomy and physiology and integration of pathophysiology involved in administration of anesthesia for patients who present with renal or respiratory pathology. Pathological implications of acute and chronic renal failure, renal transplantation, pulmonary disease states: obstructive and restrictive diseases, one lung ventilation, and acute pulmonary disease states and their management. Prerequisite(s): 524 and 525; Corequisite(s): 523.

N518 Advanced Pathophysiology: Obstetrics/Pediatric Anesthesia (2)

Review of anatomy and physiology with focus on the integration of pathophysiology for obstetrical and pediatric patients requiring anesthetic care. Prerequisite(s): 524 and 525; Corequisite(s): 523.

N522 Integrated Health Science For Anesthesia (3)

Fundamental principles of chemistry and physics as related to practice of nurse anesthesia. Correlation of principles to clinical anesthesia practice. Corequisite(s): 524.

N523 Advanced Principles of Nurse Anesthesia Practice (2)

Advanced concepts/principles of anesthetic management and legal implications of nurse anesthesia practice.

N524 Basic Principles of Anesthesia I (3)

An introduction to the scientific principles upon which anesthesia administration is based. The focus of this course (part one of a two part series) is on the sound elementary principles of safe anesthesia delivery for the beginning practitioner.

N525 Basic Principles of Anesthesia II (3)

A continuation of N524 (Basic Principles of Anesthesia I) which builds upon the previous course to provide advanced elementary scientific principles upon which nurse anesthetists implement plans of care which have been developed. The focus of this course (part two of a two part series) is on the sound basic principles of safe anesthesia management for the beginning practitioner.

N526 Professional Issues in Nurse Anesthesia (2)

Exploration of historical and current issues surrounding nurse anesthesia education, practice, and the profession.

N582 Scholarly Inquiry for Advanced Practice (3)

Non-thesis option. Utilization of research process through experiential or critical evaluation of science in area of interest. Conducted under faculty guidance and culminating in scholarly product. Repeatability: May be repeated. Maximum 6 hours. Corequisite(s): 501.

N544, 545, 546, 547, 548, 549 Clinical Practica/Seminar I-VI (2-9)

Integration and application of theoretical foundations and development of clinical skills in nurse anesthesia practice under supervision of Certified Registered Nurse Anesthetist (CRNA) and/or anesthesiologist.

N583 Directed Clinical Practice in Nurse Anesthesia (4-10)

Additional opportunities for advanced nursing practice in nurse anesthesia. Objectives to be developed collaboratively by student and faculty.