NURSE ANESTHESIA

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The practice of anesthesia is the process used to render a patient insensible to pain and emotional stress during surgical, obstetrical, or some diagnostic procedures. Nurse anesthesia is an expanded role which implements both nursing and medical functions to a wide patient population for surgical and procedural interventions. The required education builds upon previous nursing experiences by incorporating rigorous scientific knowledge, and applied clinical practices which include general, regional, and local anesthetics, and advanced technology in the delivery of quality and safe anesthesia. The practice of nurse anesthesia includes, but is not limited to: pre- and post-operative assessment, planning, implementing, and managing total and safe anesthesia care to all patients regardless of age level and/or the acuity of circumstance. The nurse anesthetist works with a team of health care providers and in collaboration with anesthesiologists, or other fully-privileged physicians or dentists. Nurse anesthetists are also members on the trauma, and cardiopulmonary resuscitation teams as airway experts to secure and manage difficult airway related problems which may occur in various clinical settings.

Accreditation: The program is fully accredited by the Council on Accreditation (COA) of Nurse Anesthesia Educational Programs.

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SHAH, VIKAS: M.B., B.S., BJ Medical College; Clinical Assistant Professor
**AN 7010 Advanced Health and Physical Assessment and Clinical Anesthesia Practicum I Cr. 1**

Advanced systematic focus on health assessment, anatomical and physical limitations, and impact on anesthesia practice. Offered Fall.  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.  
**Course Material Fees:** $10

**AN 7020 Clinical Anesthesia Practicum II Cr. 2**

Continuation of AN 7010. Offered Winter.  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7030 Clinical Anesthesia Practicum III Cr. 2**

Continuation of AN 7020. Offered Spring/Summer.  
**Prerequisites:** ([AN 7020])  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7040 Clinical Anesthesia Practicum IV Cr. 3**

Continuation of AN 7030. Offered Fall.  
**Prerequisites:** ([AN 7030])  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7050 Clinical Anesthesia Practicum V Cr. 3**

Continuation of AN 7040. Offered Winter.  
**Prerequisites:** ([AN 7040])  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7060 Clinical Anesthesia Practicum VI Cr. 2**

Continuation of AN 7050. Offered Spring/Summer.  
**Prerequisites:** ([AN 7050])  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7070 Clinical Practice I Cr. 2**

Outpatient anesthesia practice; focus on airway management. Offered Every Term.  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7080 Clinical Practice II Cr. 3**

Managing complex pediatric cases involving craniofacial problems, craniotomies, spinal fusion, and abdominal cases. Offered Every Term.  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7090 Clinical Practice III Cr. 1**

Clinical experience with complex cardiac diseases requiring thoracic and cardiopulmonary bypass. Offered Every Term.  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7100 Pharmacology I Cr. 4**

Pharmacology as it relates to anesthesiology; pharmacokinetics and pharmacodynamics. Offered Fall.  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.  
**Course Material Fees:** $15

**AN 7110 Pharmacology II Cr. 3**

Analysis of theories of pharmacology. Offered Winter.  
**Prerequisites:** ([AN 7100])  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.  
**Course Material Fees:** $15

**AN 7120 Advanced Pharmacology of Anesthesia Cr. 2**

General qualitative and quantitative aspects of pharmacology. Interaction and kinetics of pharmacologic agents and their relationship to anesthetic practice. Offered Fall.  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**AN 7150 Principles of Anesthesia I Cr. 4**

Principles and usage of all anesthesia equipment including electronic instrumentation. Theoretical exploration of various techniques of anesthesia. Offered Fall.  
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.  
**Course Material Fees:** $15
AN 7160 Principles of Anesthesia II Cr. 3
Advanced knowledge in application and use of modern anesthesia monitoring technology. Offered Winter.
Prerequisites: (AN 7150)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $15

AN 7170 Principles of Anesthesia III Cr. 2
Continuation of AN 7160. Offered Spring/Summer.
Prerequisites: (AN 7150)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $10

AN 7180 Electrocardiography in Anesthesia Practice Cr. 1
Background for monitoring, diagnosing, and treating cardiac arrhythmias in the perioperative period. Working background in fundamentals of 12-lead ECG interpretation; its application in the perioperative period. Offered Winter.
Prerequisites: (AN 7150)
Restriction(s): Enrollment is limited to students in the MS in Anesthesia program; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $12.5

AN 7190 Advanced Cardiovascular Patho-physiology and EKG Cr. 1
Advanced cardiovascular pathophysiology, assessing and diagnosing cardiac dysfunctions, and integration of appropriate clinical interventions in the anesthetic management plan of care. Offered Fall.
Prerequisites: (AN 7180 with a minimum grade of C)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $12.5

AN 7240 Advanced Physiology and Pathophysiology Cr. 2
Advanced knowledge in physiology; in-depth analysis of disease processes; correlation of pathophysiology, pharmacology, and advanced principles of anesthesia care. Offered Spring/Summer.
Prerequisites: (PSL 7030 with a minimum grade of C)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $10

AN 7500 Chemistry and Physics of Anesthesia Cr. 2
Analysis and principles of chemistry and physics as applied to anesthesia. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $20

AN 7590 Advanced Anatomy for Nurse Anesthetists Cr. 4
Structural and functional aspects of the human body; relationships to nurse anesthesia practice. Study of regions in which anesthesia may be induced. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $400

AN 7600 Regional Anesthesia Cr. 2
Review of the anatomy and physiology of the spinal cord and peripheral nerves and the pharmacology of local anesthetic agents. Techniques of pain management administration and management of spinal/epidural and peripheral regional anesthetics. Offered Spring/Summer.
Prerequisite: AN 7590 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $20

AN 7620 Pulmonary Mechanics and Anesthesia Implications Cr. 2
Advanced evaluation of cardiopulmonary/respiratory complication. Clinical anesthesia care. Offered Fall.
Prerequisites: (AN 7200)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

AN 7690 Advanced Clinical Anesthesia Practice Review I Cr. 1
Use of theoretical concepts and advanced clinical principles to develop the art and science of practice with emphasis on individualizing care, in addition to board preparation. Offered Winter.
Prerequisites: (AN 7170 with a minimum grade of C)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $15

AN 7700 Advanced Clinical Anesthesia Practice and Review II Cr. 1
Use of theoretical concepts and advanced clinical principles in perfecting the art and science of anesthesia practice with emphasis on preparation for board examination. Offered Winter.
Prerequisites: (AN 7170 with a minimum grade of C)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $10

AN 7730 Process of Teaching Cr. 2
Instruction in and clinical application of nurse anesthesia process. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $20

AN 7780 Professional Dimensions of Anesthesia Practice Cr. 3
Advanced knowledge in professional growth and development. Understanding the foundations and development of professional organizations, professionalism and the value of clinical services for professional growth. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Nurse Anesthesia Pract program; enrollment is limited to Graduate level students.
Course Material Fees: $15

AN 7800 Pain Management for Nurse Anesthetists Cr. 1
Regional techniques and pharmacological interventions to manage acute and chronic pain. Offered Spring/Summer.
Prerequisites: (AN 7600 with a minimum grade of C)
Restriction(s): Enrollment is limited to Graduate level students.

AN 7880 Anesthesia Seminar Cr. 1
Current developments in concepts and theories of nurse anesthesia. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 5 Credits
AN 7885 Research Design for Anesthesia Cr. 1
Research methodologies, including quantitative and qualitative statistical techniques. Emphasis on designing, implementing, and evaluating health care research. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

AN 7890 Terminal Project Cr. 1
Finalization of research; preparation for poster submission, publication and presentation of research. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $20

AN 7900 Advanced Pediatric Topics Cr. 2
Detailed advanced lectures in specific pediatric topics. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

AN 7910 Special Topics in Pediatric Anesthesia Cr. 2
Common pediatric problems; in-depth knowledge on neonatal anesthesia. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

AN 7920 Case Presentations Cr. 2
Anatomy and physiology of various diseases including principles of anesthetic management. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

AN 8810 Cardiovascular Modules II Cr. 3
Advanced patho-physiological processes with a focus on Cardiovascular pathogenesis and the impact on organ systems disease processes. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Nurse Anesthesia Pract program; enrollment is limited to Graduate level students.