AN 7010 Advanced Health Assessment and Clinical Diagnosis Cr. 3
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 is limited to students with a major in Nurse Anesthesia Practice.
**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 Fall.
**Restriction(s):** Enrollment is limited to Graduate level students.

AN 7080 Clinical Practicum VIII Cr. 3
Clinical experiences at diverse clinical settings and varying levels of patient acuity. Offered Winter.
**Prerequisite:** AN 7070 with a minimum grade of C
**Restriction(s):** Enrollment is limited to students with a major in Nurse Anesthesia Practice.

AN 7090 Clinical Practice III Cr. 1
Clinical experience with complex cardiac diseases requiring thoracic and cardiopulmonary bypass. Offered Spring/Summer.
**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Doctor of Nur Anesthesia Pract program.

AN 7100 Advanced Pharmacology I Cr. 3
Prepares students with in-depth knowledge and understanding of the Pharmacokinetics and Pharmacodynamics for the nurse anesthetist. Offered Fall.
**Prerequisite:** AN 7010 with a minimum grade of C
**Restriction(s):** Enrollment is limited to students with a major in Nurse Anesthesia Practice.
**Course Material Fees:** $15

AN 7110 Advanced Pharmacology II Cr. 3
Prepares students with in-depth knowledge and understanding of the Pharmacokinetics and Pharmacodynamics for the anesthetist. Offered Winter.
**Prerequisite:** AN 7100 with a minimum grade of C
**Restriction(s):** Enrollment is limited to students with a major in Nurse Anesthesia Practice.

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 Graduate level students; enrollment limited to students in the MS in Anesthesia program.
**Course Material Fees:** $12.5

AN 7181 Advanced Principles of Anesthesia IV Cr. 3
Continuation of previously learned concepts and principles of safe anesthesia practice in the treatment and management of multiple co-morbidities and disease processes. Offered Winter.
**Prerequisite:** AN 7170 with a minimum grade of C
**Restriction(s):** Enrollment is limited to students with a major in Nurse Anesthesia Practice.

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 7220 Advanced Physiology Cr. 4
Examine normal physiology with emphasis on the respiratory, renal, cardiovascular, neurological, endocrine, liver functions and associated disease. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice.

AN 7230 Advanced Physiology II Cr. 3
Advanced knowledge in physiology and related physiological mechanisms governing, respiratory, cardiovascular, and the renal systems and as they relate to anesthesia. Offered Winter.
Prerequisite: AN 7220 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.

AN 7240 Advanced Physiology and Pathophysiology I Cr. 3
Advanced knowledge in physiology, in-depth analysis of disease processes; correlation of pathophysiology, pharmacology, and advanced principles of anesthesia care. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Anesthesiology or Nurse Anesthesia Practice.

AN 7240 Advanced Physiology and Pathophysiology II Cr. 3
An in-depth assessment human physiology, and disease processes to include analysis of cellular structure and functions of the total body system. Offered Winter.
Prerequisite: AN 7240 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Anesthesiology or Nurse Anesthesia Practice.
Course Material Fees: $10

AN 7500 Chemistry and Physics for the Anesthetist Cr. 2
Analysis and principles of chemistry and physics applied to anesthesia. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice.
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 complications. Clinical anesthesia care. Offered Fall.
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.
Prerequisite: 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.
Prerequisite: 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
Advanced teaching and learning concepts. Understanding diversity in the classroom, and learning styles. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Course Material Fees: $20

AN 7780 Professional Dimensions Cr. 3
Understanding the history and professional organization roles in ensuring standards of practice and commitment to society. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice.
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.
Prerequisite: 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 7891 Advanced Clinical Application I Cr. 2
This is designed for comprehensive assessments of students learned scientific, practical and technical knowledge and readiness for the National Board Examination. Offered Winter.
Prerequisite: AN 7181 with a minimum grade of C and AN 7241 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice.
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 8000 Capstone Preparation I Cr. 1
Begin fundamental strategies for research development toward applicable clinical doctoral studies. Offered Winter.
Prerequisite: AN 7890 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice.

AN 8001 Capstone Preparation II Cr. 1
Develop and present appropriate protocol for timely research process. Offered Spring/Summer.
Prerequisite: AN 8000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Nurse Anesthesia Practice.

AN 8002 Capstone Preparation III Cr. 1
Develop and present appropriate protocol for timely research. Offered Fall.
Prerequisite: AN 8001 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Nurse Anesthesia Practice.

AN 8003 Capstone Completion I Cr. 1
Strategies for data analysis and methodology of research findings. Offered Winter.
Prerequisite: AN 8002 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Nurse Anesthesia Practice.

AN 8004 Capstone Completion II Cr. 1
Strategies for data analysis and methodology to present findings. Offered Spring/Summer.
Prerequisite: AN 8003 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Nurse Anesthesia Practice.