

ANESTHESIA (ANES)

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ANES 5101 Medical Terminology (1 Credit)

Students will be taught common medical terminology, abbreviations and symbols used to describe procedures, techniques, imaging types, body systems, disease processes and procedures. Letter Graded

ANES 5102 Electrocardiophysiology (ECG) (1 Credit)

This course will teach peri-operative electrocardiophysiology monitoring and advanced cardiac life support. Students will learn how to interpret and monitor EKG rhythms and how to manage pathologic conditions that are detected. The course will also emphasize relevant anatomy, physiology, pharmacology and medical equipment. Letter Graded

ANES 5103 Principles of Life Support (1 Credit)

This course is designed to teach the principles of cardiopulmonary resuscitation for adults and children. Students will be taught the most up to date resuscitation guidelines and will become certified in Basic Life Support (BLS) CPR, Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). Letter Graded

ANES 5104 Ethics & Professionalism (1 Credit)

This course will explore the professionalism expectations and obligations of healthcare personnel with a focus on peri-operative specific concerns such as respect for patient privacy (HIPPA laws), resolving conflicts, conflict of interest, abuse of authority, sexual harassment, accountability, integrity, wellness/burnout prevention, substance abuse and mandatory reporting. Letter Graded

ANES 5105 Current Trends in Anesthesia I (1 Credit)

This course provides an overview of the most up to date literature, emerging technologies, novel treatment modalities, new medications, and current research trends/findings. Students will also develop and deliver their Capstone Project Plan - a research project related to a current anesthesia trend. Letter Graded

ANES 5106 Anesthesia Practice Review I (1 Credit)

This course is designed to review the principles of anesthesia and prepare students for more complex topics that include autoimmune diseases, comatose states, hepatic anatomy and physiology, anticoagulants, clotting factors, and mechanical circulatory support. Letter Graded

ANES 5107 Board Preparation (1 Credit)

This course will review the key content covered in the National Certifying Exam for the Certification of Anesthesia Assistants. Letter Graded

ANES 5108 Anesthesia Practice Review II (1 Credit)

This course is designed to review the principles of shock states, vascular pathophysiology, hepatic disorders, transfusion reactions, and cardiovascular anesthesia. Letter Graded

ANES 5109 Anesthesia Practice Review III (1 Credit)

This course is designed to review the endocrine and neuroendocrine disorders, vasoactive agents, OB pharmacology and physiology, pediatric pharmacology and physiology, vitamins and supplements, otorhinolaryngology anesthesia, and laser surgery and safety. Letter Graded

ANES 5150 Crisis Management Simulation (1 Credit)

This is an advanced simulation course that simulates cardiac, respiratory, pediatric, neurologic, and obstetric emergencies that can potentially happen in the perioperative period. The focus of this course is to strengthen technical skills, clinical judgment, and inter-disciplinary team communication skills. Letter Graded

ANES 5151 Subspecialty Case Based Simulation (1 Credit)

Students will explore the management of complex sub-specialty (Pediatrics, Cardiac, OB, Neuro) cases in a simulated environment. Other topics include interventional radiology, craniectomies, BLS, ACLS, and PALS simulation, trauma surgery, TIPS, ESRD and diabetic management, AICD management, burn management, atrial-fibrillation management, and Video Assisted Thoracic Surgery (VATS). Letter Graded

ANES 5152 Subspecialty Case Based Simulation II (1 Credit)

Students will explore the management of complex sub-specialty cases in a simulated environment. Other topics include surgical site infection protocols, spinal and epidural placement, ultrasound guided IV and arterial line placement, MAC, and Non-Operating Room Anesthesia (NORA), and central line placement. Letter Graded

ANES 5153 Subspecialty Case Based Simulation III (1 Credit)

Students will assist and instruct the junior-level anesthesiologist assistant students who have matriculated this semester. Topics include anesthesia equipment and safety, pharmacology, airway management, induction, anesthetic maintenance, emergency, infection control, aseptic technique, communication, ethical and professional conduct, and patient safety and quality improvement. Letter Graded

ANES 5201 Pharmacology for the Anesthesiologist Assistant I (2 Credits)

The focus of this course is to instruct students on the pharmacokinetics and pharmacodynamics of the most commonly used medications in anesthesia. Letter Graded

ANES 5202 Airway Management (2 Credits)

This course will explore the anatomy, structure, function and management of both the adult and pediatric airways. Letter Graded

ANES 5203 Patient Monitoring and Instrumentation I (2 Credits)

This course will explore the ASA standard monitoring system, advanced patient monitoring and the associated equipment and technical skills necessary to monitor patient vital signs. Monitoring modalities taught include electrophysiology, non-invasive and invasive blood pressure monitoring, bispectral index, pulse oximetry (including the medications and clinical scenarios that can alter this reading), respiratory gas analysis, temperature monitoring, advanced hemodynamic monitoring, coagulation studies (TEG analysis), neuromuscular junction monitoring, transesophageal echocardiography, cerebrovascular testing, microbial analysis and urinalysis. Letter Graded

ANES 5204 Pharmacology for the Anesthesiologist Assistant II (2 Credits)

This is an advanced course focusing on the pharmacokinetics and pharmacodynamics of more complex and less common anesthetic agents. Letter Graded

ANES 5205 Patient Monitoring and Instrumentation II (2 Credits)

This is an advanced course focusing on how to provide anesthetic care for complex patients. The emphasis is on advanced patient monitoring techniques, equipment and modalities. Letter Graded

ANES 5206 Anesthesia Principles & Practice III (2 Credits)

This course will continue to guide anesthesiologist assistant students on how to develop the critical thinking skills and advanced technical skills necessary to be a well-rounded, competent mid-level provider capable of assisting the anesthesiologist and other members of the perioperative care team manage crisis care. Students will participate in specialty-based anesthesia management problem-based learning discussions in this course. Letter Graded

ANES 5207 Applied Physiology III (2 Credits)

This course will take a more in-depth exploration of the human body systemic functions and will focus on how derangements in these systems affect the evaluation of and ASA (American Society of Anesthesiology) classification of patients, specifically how knowledge of patient physiological derangements affects their overall anesthetic risk for morbidity and mortality. The major organ systems (cardiac, neurological, renal, gastrointestinal, liver, and immunologic systems) will be covered. Letter Graded

ANES 5250 Case Based Simulation II (2 Credits)

In this advanced course, a simulator will be used to engage students in active learning and critical thinking by participation in clinical case-based scenarios structured to cover advanced anesthesia monitoring, instrumentation and crisis management. The cases will develop student's understanding of applied physiology, pharmacology, and advanced monitoring skills to detect and remedy simulated patient anesthetic complications and hemodynamic perturbations. Letter Graded

ANES 5301 Introduction to Physiology I (3 Credits)

This course will expand upon basic anatomy and physiology learned in the pre-requisite undergraduate courses, focusing on clinically relevant physiology and pathologic processes. Intrinsic details and functionality of the major organ systems (cardiac, neurological, renal, gastrointestinal, liver, and hematologic systems) will be covered. Letter Graded

ANES 5302 Applied Physiology in Anesthesia I (3 Credits)

This is an advanced course that will utilize an organ system approach to teach human pathology. Students will learn how to evaluate the severity of patient disease to determine anesthetic risk. The major organ systems (cardiac, neurological, renal, gastrointestinal, liver, and hematologic systems) will be covered. Letter Graded

ANES 5303 Applied Physiology in Anesthesia II (3 Credits)

This advanced course will take a more in-depth exploration of human systemic functions and pathology that include trauma anesthesia, critical care, pediatric anesthesia, obstetric anesthesia, and pediatric cardiovascular anesthesia. Letter Graded

ANES 5350 Introduction to Physiological Simulation (3 Credits)

Students will learn technical skills like peripheral intravenous catheter placement and participate in simulated clinical scenarios. This course will focus on patient monitoring (pulse oximetry, capnography, blood pressure measurement, heart rate/EKG, temperature, respiratory rate), exploration of anesthesia machine functionality, anesthetic alarm interpretation, breathing circuits, cardiac output monitoring, arterial pressure monitoring and central venous pressure monitoring. Letter Graded

ANES 5351 Case Based Simulation I (3 Credits)

Students will engage in active learning and critical thinking by participation in clinical case-based scenarios structured to cover common intraoperative complications. The cases will develop student's understanding of applied physiology, pharmacology, and advanced monitoring skills to detect and remedy simulated patient anesthetic complications and hemodynamic perturbations. Letter Graded

ANES 5401 Anatomy (4 Credits)

This course will integrate structural anatomy with radiographic visualizations to establish foundational knowledge necessary to comprehend and explore the anesthetic techniques utilized clinically to provide anesthesia for a complex array of surgical procedures. Letter Graded

ANES 6101 Clinical Anesthesia Experience IV (10 Credits)

In this course, students will continue to rotate on the advanced anesthesia clinical services such as Pediatric Anesthesia, Cardiovascular Anesthesia, Obstetrical Anesthesia, Trauma, Neurosurgical Anesthesia, Pediatric Cardiovascular Anesthesiology, ICU, Anesthesia Clinic, Regional Anesthesia, and Advanced Orthopedic Surgical Anesthesia with an Acute Pain Management Focus. Students will receive supervised instruction in the operating room. Letter Graded

ANES 6102 Clinical Anesthesia Experience V (10 Credits)

In this course, students will continue to rotate on the advanced anesthesia clinical services such as Pediatric Anesthesia, Cardiovascular Anesthesia, Obstetrical Anesthesia, Trauma, Neurosurgical Anesthesia, Pediatric Cardiovascular Anesthesiology, ICU, Anesthesia Clinic, Regional Anesthesia, and Advanced Orthopedic Surgical Anesthesia with an Acute Pain Management Focus. Students will receive supervised instruction in the operating room. Letter Graded

ANES 6103 Clinical Anesthesia Experience VI (10 Credits)

In this course, students will continue to rotate on the advanced anesthesia clinical services such as Pediatric Anesthesia, Cardiovascular Anesthesia, Obstetrical Anesthesia, Trauma, Neurosurgical Anesthesia, Pediatric Cardiovascular Anesthesiology, ICU, Anesthesia Clinic, Regional Anesthesia, and Advanced Orthopedic Surgical Anesthesia with an Acute Pain Management Focus. Students will receive supervised instruction in the operating room. Letter Graded

ANES 6104 Sub-Specialty Elective (1 Credit)

In this course, the student will spend their time in clinicals in a sub-specialty area of interest. This can include Pediatric anesthesia, Obstetrical anesthesia, Trauma, Regional anesthesia, Cardiovascular anesthesia, Neurosurgical anesthesia, and Non-Operative Room Anesthesia. The student will devise a project proposal in collaboration with a faculty member of their choosing that summarizes the clinical pearls of the subspecialty. The student will present the content to their student colleagues. Letter Graded

ANES 6201 Anesthesia Principles & Practice I (2 Credits)

This course will guide anesthesiologist assistant students on how to develop an anesthetic plan and preoperatively assess their patients in the domains of respiratory, cardiac, GI, renal, neuro, endocrine, hepatic, coagulation, and preoperative testing evaluation. Letter Graded

ANES 6202 Anesthesia Principles & Practice II (2 Credits)

This course will guide anesthesiologist assistant students on how to develop the critical thinking skills and advanced technical skills necessary to be a well-rounded, competent mid-level provider capable of assisting the anesthesiologist and other members of the perioperative care team manage crisis care. Students will participate in specialty-based anesthesia management problem-based learning discussions in this course Letter Graded

ANES 6301 Orientation to Clinical Anesthesia (3 Credits)

This introductory course will orient anesthesia assistant students to the clinical environment and teach them how to assimilate into the anesthesia care team. Topics of study will include: infection control, universal precautions, hand washing, operating room standard protocols, sterile technique, an overview of the history of anesthesia, the types of anesthetics delivered, ASA standard monitoring, the basics of the anesthesia machine. Letter Graded

ANES 6302 Clinical Anesthesia Experience I (3 Credits)

This course gives students exposure to complex anesthesia intraoperative environment. Students will apply the knowledge gained during the introductory didactic courses to practical clinical cases in the surgical environment. Letter Graded

ANES 6303 Clinical Anesthesia Experience II (3 Credits)

This course continues to give students exposure to complex anesthesia intraoperative environment. Students will apply the knowledge gained throughout their training to practical clinical cases in the surgical environment. Letter Graded

ANES 6801 Clinical Anesthesia Experience III (8 Credits)

In this course, students will begin to rotate on the advanced anesthesia clinical services such as Pediatric Anesthesia, Cardiovascular Anesthesia, Obstetrical Anesthesia, Trauma, Neurosurgical Anesthesia, Pediatric Cardiovascular Anesthesiology, ICU, Anesthesia Clinic, Regional Anesthesia, and Advanced Orthopedic Surgical Anesthesia with an Acute Pain Management Focus. Students will receive supervised instruction in the operating room. Letter Graded