

# ANESTHESIOLOGY (AN)

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## **AN 0302 - Anesthesiology Career Exploration**

1-2 Credits (Repeatable for credit)

This course may be used to register for Anesthesiology career exploration. The location of the experience may be at a SLU SOM affiliate or at another health care institution.

## **AN 0304 - Anesthesiology Career Exploration - Comprehensive Anesthesia Care**

1-4 Credits (Repeatable for credit)

Fourth year medical students are invited to rotate in the Department of Anesthesiology for two weeks. During this rotation, students will be exposed to all aspects of modern anesthetic practice as related to the care of adult patients. Students will receive practical hands-on instruction in airway management, venous and arterial access, and fluid management. Additionally, basic physiologic and pharmacological principles, which are integral in anesthetic care, will be emphasized in the operating suite. Specially designed lectures are also provided and, to complete the educational experience, students will participate in laboratory and simulation sessions designed to demonstrate basic hemodynamic monitoring and patient management. At the end of the rotation, a short written and oral examination, which evaluates the student's knowledge of anesthesiology, will be administered.

## **AN 0307 - Anesthesiology Career Exploration - Clinical Practices in Pain Management**

1-2 Credits

In this course students will be exposed to clinical management of pain in both acute and chronic presentations. This will include an exploration of the basic science and physiological understanding of pain processing and the mechanisms of pharmacological and non-pharmacologic treatments. Students will have clinical exposures in the outpatient pain clinic and on the inpatient acute pain services where clinical didactics will include exposure to patient evaluation and procedural interventions. Didactic lectures will be in the form of recorded lectures followed by small group discussions.

## **AN 0403 - General Anesthesiology**

2-12 Credits (Repeatable for credit)

Fourth year medical students are invited to rotate in the Department of Anesthesiology for two weeks. During this rotation, students will be exposed to all aspects of modern anesthetic practice as related to the care of adult patients. Students will receive practical hands-on instruction in airway management, venous and arterial access, and fluid management. Additionally, basic physiologic and pharmacological principles, which are integral in anesthetic care, will be emphasized in the operating suite. Specially designed lectures are also provided and, to complete the educational experience, students will participate in laboratory and simulation sessions designed to demonstrate basic hemodynamic monitoring and patient management. At the end of the rotation, a short written and oral examination, which evaluates the student's knowledge of anesthesiology, will be administered.

## **AN 0404 - Pediatric Anesthesiology**

2-12 Credits

During this rotation, medical students are introduced to the principles of anesthetic induction and maintenance in the pediatric patient. They are instructed on the theoretical and practical aspects of pediatric airway management, intravenous line placement, and fluid management. Each student will be expected to manage a pediatric airway (including endotracheal intubation) and start intravenous lines by the end of the rotation. General anesthesia lectures are also provided and, to complete the educational experience, students will participate in laboratory and simulation sessions designed to demonstrate basic hemodynamic monitoring and patient management. At the end of the rotation, a short written examination, which evaluates the student's knowledge of pediatric anesthesiology and the practice at Cardinal Glennon will be administered.

## **AN 0407 - Anesthesia Critical Care**

2-12 Credits

The student will be an active member of the Anesthesia Critical Care team. Students will be assigned patients for whom they will assume primary care responsibilities during their admission to the intensive care unit, with an emphasis placed upon managing acutely evolving processes, especially those related to the respiratory and hemodynamic derangements of the critically ill. Students will be involved in the pharmacological treatment of these patients as well. Opportunities to understand the indications for invasive procedures will be emphasized, and students will actively participate in the placement and monitoring of such devices under direct supervision of residents and attendings alike. Students will also be guided on the proper indications for airway intervention, as well as the eventual weaning from mechanical ventilation.

## **AN 0408 - Regional Anesthesia**

1-4 Credits (Repeatable for credit)

Students will be assigned patients for whom they will assume patient care responsibilities, with an emphasis on the indications and methods of pain management from a regional anesthesia perspective. They will also practice administering nerve blocks on computer-based and physical model simulators. Students will supplement clinical knowledge with recommended textbook readings on the anatomical and ultrasonically-guided principals of nerve blocks. Opportunities to assist with the administration of nerve block procedures under direct supervision of residents and attending physicians will be available.

## **AN 0409 - Clinical Practices in Pain Management**

1-4 Credits

In this course students will be exposed to clinical management of pain in both acute and chronic presentations. This will include an exploration of the basic science and physiological understanding of pain processing and the mechanisms of pharmacological and non-pharmacologic treatments. Students will have clinical exposures in the outpatient pain clinic and on the inpatient acute pain services where clinical didactics will include exposure to patient evaluation and procedural interventions. Didactic lectures will be in the form of recorded lectures followed by small group discussions.

## **AN 0901 - Anesthesiology Direct Patient Care**

1-12 Credits (Repeatable for credit)

This course may be used to register for an Anesthesiology elective. The elective experience must fulfill the requirements for a direct-patient care elective. The location of the experience may be at a SLU SOM affiliate or at another health care institution.

**AN 0903 - Anesthesiology Research**

1-12 Credits (Repeatable for credit)

This course may be used to register for an Anesthesiology elective. The elective experience must fulfill the requirements for a research elective. The location of the experience may be at a SLU SOM affiliate or at another health care institution.

**AN 5000 - Introduction to Anesthesia Principles**

4 Credits

This course is an 8 week introduction to all important details of anesthesia that will be delved into in the following semesters of the MMS Anesthesiology program. This course is to prepare incoming Anesthesiologist Assistant students to have a basic understanding of anesthesia principles before starting clinical rotations in operating room.

**AN 5001 - Professionalism & Advocacy of Anesthesiologist Assistant Profession**

1 Credit

The purpose of this introductory course is to identify and understand the history of the Anesthesiologist Assistant profession. Identify the structure of the different professional organizations and importance of advocacy. Understand patient safety concerns and the different organizations that monitor it.

**AN 5003 - Electrocardiography**

1 Credit

This course will be taken in the Spring semester of 1st year of program. This course will cover the different rhythm strips and proper assessment and treatment. Advanced Cardiac Life Support and Pediatric Life Support certification will also be obtained during this course.

**AN 5010 - Anesthesiology Instrumentation & Monitoring I**

2 Credits

The first of a 2-course series to instruct students on how to properly understand and utilize different monitoring tools in the OR setting. This course will be an introduction to physics in anesthesia concepts correlated with anesthesia machines and monitoring from ANES 5000.

**AN 5011 - Anesthesiology Instrumentation & Monitoring II**

2 Credits

The second of a 2-course series to instruct students on how to properly understand and utilize different monitoring tools in the OR setting. This course will be a continuation of ANES 5010 and discuss the application of monitoring of ECG, arterial blood pressure, cardiac output, respiration and respiratory gas analysis. The knowledge gained in this course will be applied in ANES 5104 and 5204.

**AN 5050 - Anesthesiology Review I**

1 Credit

This course will prepare the Anesthesiologist Assistant students for the required NCCAA certification exam after graduation. This will include different assigned reading and a monthly exam with test questions to assess mastery of topics.

**AN 5051 - Anesthesiology Review II**

1 Credit

This course will prepare the Anesthesiologist Assistant students for the required NCCAA certification exam after graduation. This will include different assigned reading and a monthly exam with test questions to assess mastery of topics.

**AN 5052 - Anesthesiology Review III**

1 Credit

This course will prepare the Anesthesiologist Assistant students for the required NCCAA certification exam after graduation. This will include different assigned reading and a monthly exam with test questions to assess mastery of topics.

**AN 5101 - Introduction to Simulation & Skills Lab**

3 Credits

The first of a series of 4 courses that prepare the Anesthesiologist Assistant students for clinical rotation by getting hands on training with equipment and simulators. The first of the series of courses will teach basic IV skills, proper machine checkout and use of different airway equipment on mannequins.

**AN 5102 - Anesthesiology Simulation & Skills Lab I**

5 Credits

This is a continuation of ANES 5101 that allows students to have hands on experience in the simulation and skills lab to learn the basics of anesthesia including induction, maintenance, and emergence. Students will correlate the knowledge learned in the classroom and apply it in simulation scenarios. They will have hands on training with IV placement, arterial line placement and airway management techniques.

**AN 5103 - Anesthesiology Simulation & Skills Lab II**

5 Credits

This is a continuation of ANES 5102 that allows students to have hands on experience in the simulation and skills lab to continue developing their anesthetic management and plans for more challenging patients. Students will correlate the knowledge learned in the classroom and apply it in simulation scenarios. They will continue hands on training with airway adjuncts, central line placement, epidural/spinal placement in the skills lab.

**AN 5104 - Anesthesiology Simulation & Skills Lab III**

4 Credits

This is a continuation of ANES 5103 that allows students to have hands on experience in the simulation and skills lab to continue developing their anesthetic management and plans for more challenging patients. Students will correlate the knowledge learned in the classroom and apply it in simulation scenarios. They will continue hands on training with epidural/spinal placement and use of ultrasound for peripheral nerve blocks in the skills lab.

**AN 5201 - Orientation to Clinical Experience**

1 Credit

This is an initial introduction for the Anesthesiologist Assistant students to the operating room at the hospitals where they will be doing Semester 2 clinical rotations. 40 hours of clinical time will be completed for this course with immersion into the clinical setting.

**AN 5202 - Anesthesiology Clinical Experience I**

5 Credits

Completion of 200 clinical hours at affiliated hospital sites with documentation of cases to meet graduation requirements set by NCCAA standards.

**AN 5203 - Anesthesiology Clinical Experience II**

6 Credits

Completion of 240 clinical hours at affiliated hospital sites with documentation of cases to meet graduation requirements set by NCCAA standards.

**AN 5204 - Anesthesiology Clinical Experience III**

4 Credits

Completion of 160 clinical hours at affiliated hospital sites with documentation of cases to meet graduation requirements set by NCCAA standards.

**AN 5205 - Anesthesiology Clinical Experience IV**

16 Credits

This course is the start of the senior year clinical consisting of monthly rotations at affiliated clinical sites in a variety of specialties. These rotations will consist of a daily attendance at the clinical site performing anesthesia with preceptors. Completion of 720 clinical hours at affiliated hospital sites with documentation of cases to meet graduation requirements set by NCCAA standards.

**AN 5206 - Anesthesiology Clinical Experience V**

16 Credits

This course continues the senior year clinicals consisting of monthly rotations at affiliated clinical sites in a variety of specialties. These rotations will consist of a daily attendance at the clinical site performing anesthesia with preceptors. Completion of 720 clinical hours at affiliated hospital sites with documentation of cases to meet graduation requirements set by NCCAA standards.

**AN 5207 - Anesthesiology Clinical Experience VI**

12 Credits

This course completes the senior year clinicals consisting of monthly rotations at affiliated clinical sites in a variety of specialties. These rotations will consist of a daily attendance at the clinical site performing anesthesia with preceptors. Completion of 480 clinical hours at affiliated hospital sites with documentation of cases to meet graduation requirements set by NCCAA standards.

**AN 5401 - Anesthesiology Principles and Practice I**

2 Credits

This is the 1st of a 3-course series that explores the formulation of an anesthetic plan based on surgical procedure and patient health history. The topics covered in this part of the series include airway management, general surgery, trauma, neurosurgery and otolaryngology surgeries.

**AN 5402 - Anesthesiology Principles and Practice II**

2 Credits

This is the 2nd of a 3-course series that explores the formulation of an anesthetic plan based on surgical procedure and patient health history. The topics covered in this part of the series include orthopedic, cardiovascular, thoracic, and ophthalmology surgeries.

**AN 5403 - Anesthesiology Principles & Practice III**

2 Credits

This is the 3rd of a 3-course series that explores the formulation of an anesthetic plan based on surgical procedure and patient health history. The topics covered in this part of the series include obstetrics, pediatrics, geriatric and out of OR procedures.

**AN 5501 - Anesthesia and Coexisting Diseases I**

3 Credits

This is the 1st of a 3-part series of courses to identify and understand the different organ systems and the physiological applications in anesthesia. This course will focus on cardiovascular and respiratory diseases and the anesthetic management of those patients.

**AN 5502 - Anesthesia and Coexisting Diseases II**

3 Credits

This is the 2nd of a 3-part series of courses to identify and understand the different organ systems and the physiological applications in anesthesia. This course will focus on pediatric, neurological, neuromuscular and hematological diseases and the anesthetic management of those patients.

**AN 5503 - Anesthesia and Coexisting Diseases III**

3 Credits

This is the final course in a 3 part series to identify and understand the different organ systems and the physiological applications in anesthesia. This course will focus on renal, hepatic, gastrointestinal and maternal-fetal disease and the anesthetic management of those patients.

**AN 5550 - Clinical Pharmacology I**

2 Credits

This course will provide the understanding of pharmacodynamics and pharmacokinetics. The drugs/drug classes studied in this course include inhaled anesthetics, analgesics, local anesthetics, anticholinergic, anticholinesterases, neuromuscular blocking agents, antiemetics and benzodiazepines.

**AN 5551 - Clinical Pharmacology II**

2 Credits

This course will provide the understanding of pharmacodynamics and pharmacokinetics. The drugs/drug classes studied in this course include NSAIDs, antiarrhythmics, diuretics, calcium channel blockers, adrenergic agonists and antagonists, antihistamines, endocrine related drugs, seizure drugs, anticoagulants and obstetric related drugs.

**AN 5600 - Anesthesia Senior Seminar I**

1 Credit

This is a virtual course that will be conducted with students during their second year off site clinical rotations. A weekly call will be conducted via Zoom where students will give case presentations or literature reviews on anesthesia topics related to their current rotation.

**AN 5601 - Anesthesia Senior Seminar II**

1 Credit

This is a virtual course that will be conducted with students during their second year off site clinical rotations. A weekly call will be conducted via Zoom where students will give case presentations or literature reviews on anesthesia topics related to their current rotation.

**AN 5602 - Anesthesia Senior Seminar III**

1 Credit

This is a virtual course that will be conducted with students during their second year off site clinical rotations. A weekly call will be conducted via Zoom where students will give case presentations or literature reviews on anesthesia topics related to their current rotation.