

Anesthesia

Chair

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Website: <https://anesthesia.medicine.uiowa.edu/>

Since its inception, the Department of Anesthesia at the University of Iowa has educated more than 700 anesthesiologists, and at least 18 former residents have served as heads of departments of anesthesiology at American medical colleges.

The department has been, and continues to be, well-represented on editorial boards of major anesthesia journals. It provides refresher course lectures for the annual meeting of the American Society of Anesthesiologists, has physician-researchers who are recognized by the National Institutes of Health as independently funded principal investigators, provides many board examiners for the oral exams of the American Board of Anesthesiology, and has earned high national ranking because of these and other objective accomplishments.

The department coordinates the Anesthesia Nursing Program, a collaboration between the Carver College of Medicine and the College of Nursing. The program, which is open to nurses who hold a bachelor's degree, prepares nurse anesthetists to serve rural hospitals in Iowa and nationwide. The curriculum provides intensive training in didactic and clinical anesthesia and includes diverse clinical experience as well as classroom instruction, seminars, and clinical case conferences. For more information, see the Doctor of Nursing Practice (College of Nursing) section of the catalog.

MD Training

The Department of Anesthesia introduces second-year medical students to anesthesia as a specialty; helps third-year students develop concepts and technical skills related to resuscitation, airway management, and care of the unconscious patient; and offers fourth-year students intensive study in the specialty.

The department offers the following courses for medical students. For course descriptions and prerequisite information, see Courses [p. 1] in this section of the catalog.

Course #	Title	Hours
ANES:8301	Clinical Anesthesia	2
ANES:8401	Clinical Anesthesia Senior	arr.
ANES:8402	Surgical and Neurosciences Intensive Care	arr.
ANES:8403	Chronic Pain Management	2
ANES:8495	Intensive Care Off Campus	arr.
ANES:8497	Research in Anesthesia	arr.
ANES:8498	Anesthesia On Campus	arr.
ANES:8499	Anesthesia Off Campus	arr.

Residency

Postgraduate and Residency Program

The department's postgraduate and residency program involves diverse clinical experiences, seminars and teaching conferences, and ongoing research activities that help postgraduate students and residents develop the knowledge and skills required of an anesthesia specialist.

Courses

Anesthesia Courses

ANES:6004 Scientific Principles for Anesthesia Practice 4 s.h.

Applicable chemical and physical properties of molecules important in anesthesia; technological principles and equipment used to safely deliver those molecules to patients and monitor patients during anesthesia; topics include basic chemical and physical calculations, properties of substances in solution, measurement, behavior of gases and other fluids, effects of heat transfer, and the specific chemistry of inhaled and intravenous anesthetics and adjuvant drugs. Corequisites: NURS:6006. Same as NURS:6004.

ANES:6006 Pharmacology of Anesthesia Practice 3 s.h.

Builds on content from foundational graduate pharmacology course; focus on safe prescribing, administration, and management of medications used to provide general, regional, or local anesthesia and analgesia for all patient populations across lifespan undergoing varied surgical, obstetrical, or other procedures in any health care setting. Prerequisites: PCOL:6204 with a minimum grade of B-. Requirements: enrollment in anesthesia nursing program. Same as NURS:6006.

ANES:6007 Basic Principles of Anesthesia Practice 5 s.h.

Overview and integration of anesthetic agents and techniques; patient assessment, preoperative airway evaluation, anesthetic planning, principles of fluid management, and arterial blood gas interpretation; principles of general and regional anesthesia and techniques as they pertain to each surgical specialty; Occupational, Safety and Health Administration (OSHA), The Joint Commission (TJC), and institutional regulations and requirements pertinent to anesthesia practice. Prerequisites: NURS:6004 with a minimum grade of B- and NURS:6006 with a minimum grade of B-. Same as NURS:6007.

ANES:6010 Advanced Principles of Anesthesia Practice I 4 s.h.

Special needs and intraoperative anesthetic management of complex patient populations and those with advanced pathologic states; anesthetic techniques for specific surgical subspecialties including pediatrics, obstetrics, neurosurgery, cardiac, vascular, thoracic, transplant, trauma, EENT, dental, and aesthetic or reconstructive procedures; pertinent pathophysiology and anesthetic monitoring and management techniques; clinical case conferences provide opportunities to discuss perianesthetic complications and challenges. Prerequisites: NURS:6007 with a minimum grade of B- or ANES:6007 with a minimum grade of B-. Same as NURS:6010.

ANES:6012 Advanced Principles of Anesthesia Practice II 1 s.h.

Acute and chronic pain treatment modalities for all patients presenting for a variety of medical or surgical procedures across the lifespan. Prerequisites: NURS:6007 with a minimum grade of B- or ANES:6007 with a minimum grade of B-. Same as NURS:6012.

ANES:6050 Introductory Clinical Anesthesia 2 s.h.

Initial mentorship in clinical anesthesia; development of basic clinical skills needed for a career as nurse anesthetist; application and integration of theoretical knowledge in clinical setting. Prerequisites: NURS:6004 and NURS:6006. Corequisites: NURS:6007. Same as NURS:6050.

ANES:6051 Clinical Anesthesia I 2 s.h.

Mentored clinical anesthesia experience; advancement and enhancement of clinical skills in providing anesthesia for various surgical subspecialties including general, orthopedic, pediatric, geriatric, gynecologic, urologic, dental, EENT, ambulatory surgery, and invasive diagnostic procedures. Prerequisites: NURS:6050 or ANES:6050. Corequisites: NURS:6010. Same as NURS:6051.

ANES:6052 Clinical Anesthesia II 2 s.h.

Additional mentored clinical anesthesia experience; advancement and enhancement of clinical skills in providing anesthesia for various surgical subspecialties including general, orthopedic, pediatric, geriatric, gynecologic, urologic, dental, EENT, ambulatory surgery, and invasive diagnostic procedures. Prerequisites: NURS:6051 or ANES:6051. Same as NURS:6052.

ANES:6053 Advanced Clinical Anesthesia 2 s.h.

Mentored clinical anesthesia at selected sites; development of advanced clinical skills and critical thinking by providing anesthesia for all surgical specialties and invasive diagnostic procedures in all anesthetizing locations; providing anesthesia for all patients in all settings, including on call emergency surgeries. Prerequisites: NURS:6052. Same as NURS:6053.

ANES:6054 Obstetrical Anesthesia 2 s.h.

Experience delivering analgesia and anesthesia for parturients during labor and delivery process. Prerequisites: NURS:6052. Same as NURS:6054.

ANES:6055 Rural Anesthesia 2 s.h.

Opportunity to develop experience providing anesthesia and associated health care services at UI-affiliated clinical sites in rural settings. Prerequisites: NURS:6052. Same as NURS:6055.

ANES:8007 Medical Student Fellowships in Anesthesia (Externships) 0 s.h.

Anesthesia call team clinical experience. Requirements: MD standing in anesthesia externship.

ANES:8301 Clinical Anesthesia 2 s.h.

Clinical instruction in perioperative care of the surgical patient; preoperative evaluation, consideration of coexisting medical problems, intraoperative care, postoperative management; basic airway management; introduction to clinical management of acute and chronic pain; case conferences, simulator training.

ANES:8401 Clinical Anesthesia Senior arr.

Advanced clinical experience in anesthesia management of surgical patients with coexisting medical problems; clinical experience in various forms of anesthesia; general, regional (spinal, epidural, peripheral nerve block) anesthesia; practical experience in airway management; mask ventilation, endotracheal intubation, LMA placement, other alternative airway techniques; medical management of surgical patient under anesthesia; pharmacology, cardiovascular and pulmonary physiology; case conferences.

ANES:8402 Surgical and Neurosciences Intensive Care arr.

Evaluation and treatment of critically ill neurological and post-surgical patients; evaluation of pulmonary function, ventilator management, monitoring and management of hemodynamics, fluid balance, acid-based problems, acute kidney injury, acute neurological events, and advanced monitoring techniques.

ANES:8403 Chronic Pain Management 2 s.h.

How to interview and assess patients with pain, work with a multidisciplinary team to determine the type of pain and/or diagnosis, and develop a multimodal treatment plan; readings, classroom discussions, and experiential activities.

ANES:8495 Intensive Care Off Campus arr.

Evaluation and treatment of seriously ill patients in an intensive care unit (other than University of Iowa Hospitals and Clinics); artificial ventilation, evaluation of pulmonary function, monitoring of cardiovascular status, fluid balance and acid base problems, advance monitoring techniques. Prerequisites: ANES:8401. Requirements: 4 s.h. of ANES:8401.

ANES:8497 Research in Anesthesia arr.

Medical research, clinical or laboratory projects; individual study.

ANES:8498 Anesthesia On Campus arr.

Well defined research project relating to anesthesia; arranged by student with departmental approval.

ANES:8499 Anesthesia Off Campus arr.

Knowledge development in anesthesia work and monitor use; ability to identify respiratory, cardiovascular, and neurologic effects of anesthetic agents; skill in airway management; basic skills in general, spinal, epidural, and peripheral nerve block anesthesia.