

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY

Abbreviated Description of Program

This on-line document contains an abbreviated description of the Master of Medical Science Program in Anesthesiology – intended to provide an overview of the educational program. Information contained herein is not complete and does not represent the conditions under which any individual will matriculate. Up-to-date information about any aspect of the program can be obtained from the Program Office. Matriculants will be provided with complete program information at the time of registration.

Master of Medical Science Program
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EMORY UNIVERSITY

Equal Opportunity

Emory University does not discriminate in admissions, educational programs, or employment on the basis of race, color, religion, sex, sexual orientation, national origin, age, disability, or Veteran/Reserve/National Guard status and prohibits such discrimination by its students, faculty, and staff. Students, faculty, and staff are assured of participation in University programs and in use of facilities without such discrimination. The University also complies with all applicable federal and Georgia statutes and regulations prohibiting unlawful discrimination. All members of the student body, faculty, and staff are expected to assist in making this policy valid in fact. Any inquiries regarding this policy should be directed to the Emory University Office of Equal Opportunity Programs, 110 University Administration Building, Atlanta, GA 30322. Telephone 404 727 6016 (V) 404 712 2049 (TDD). Complete information is available at www.emory.edu/EEO.

Affirmative Action

Emory University has an approved Affirmative Action Plan and complies with Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, the Vietnam Era Veteran's Readjustment Assistance Act, and applicable regulations there under. Any inquiries should be directed to the Emory University Office of Equal Opportunity Programs, 110 University Administration Building, Atlanta, GA 30322. Telephone 404 727 6016 (V) 404 712 2049 (TDD).

ANESTHESIOLOGY PROGRAM

The Master of Medical Science Program in Anesthesiology accepts qualified individuals into a 24-month, general track or 20-month, PA-C track clinical masters-degree program and provides direction, motivation, and didactic and clinical opportunities to enable the students to become knowledgeable, skilled, safe anesthetists with sound clinical judgement. In addition, the Anesthesiology Program imbues professionalism, including commitment to patients and the community, and inculcates a life-long desire for learning.

The Program's obligation to the public, to employers, and to the profession is such that awarding a Master of Medical Science Degree indicates that the Anesthesiology Program's faculty agree that the student has attained proficiency in the delivery of anesthesia and has exhibited good ethical and moral behavior.

Students with poor performance in academics, clinical, or conduct will be counseled and will be carefully monitored by Program faculty for suitability to continue in the Program. Students must meet the academic standards of the Anesthesiology Program and Emory University in order to continue in the Anesthesiology Program. Students who are performing well in the classroom but are having difficulty with clinical assignments may be required to perform remedial clinical work in order to continue in the Program. Students who are performing well in the classroom and with clinical assignments but exhibit poor conduct will not be permitted to continue in the Program. Students must perform satisfactorily in all three areas in order to graduate from the Program. Deficiencies in any area must be resolved in order to continue in the Program.

The Program has an obligation to students to provide high quality learning experiences in the classroom and in the clinical environment. The Program is continually reevaluating the methods and people responsible for teaching, and students are encouraged to provide feedback on their educational experience. The Program expects that students will take the initiative and assume responsibility for optimizing their own educational

experience and will avail themselves of the opportunities that exist in the University, the School of Medicine, the Department of Anesthesiology, the Program, and the clinical sites.

The Program has an obligation to the faculty to provide the most qualified students through a fair and impartial admissions process and to provide the facilities, instructional equipment, and other resources necessary to support the teaching process.

Facilities

The Anesthesiology Program is located at Executive Park in Suite 300 of Building 57. The Anesthesiology Program Office includes faculty and staff offices, classrooms, library, learning resources center, laboratory, and other facilities. Basic science courses are taught in their respective departments on the main Emory campus. An Anesthesiology Library is available in the Program Office. Medical libraries are available on the main Emory campus and in many of the hospitals at which students rotate.

Organization

Two Program Directors are jointly responsible for the organization and overall operation of the Program. The Academic Program Director and the Clinical Program Director work closely to integrate and manage all Program activities. The Assistant Program Director is responsible for day-to-day operations and is the principle contact for students' registration, scheduling, and grade reporting. Other staff members include a Associate Director of Admissions; an Educational Program Coordinator who handles evaluation, testing, and technology; and an Administrative Assistant.

Accreditation

Anesthesiologist assistants were officially recognized by the American Medical Association [AMA] as a new emerging health occupation in 1985. The AMA through its Committee on Allied Health Education and Accreditation [CAHEA] approved the Education Essentials for Anesthesiologist Assistant Educational Programs, which provides the basis for establishing and reviewing educational programs for anesthesiologist assistants. The Commission on Accreditation of Allied Health Educational Programs [CAAHEP] became CAHEA's legal successor in 1994. Information on accreditation can be obtained on CAAHEP's web site, www.caahep.org. Emory's Master of Medical Science Program was initially accredited in 1988 and was reaccredited in 1994, 2002, and 2007.

ATTENDANCE

There are no formal requirements for class attendance. Attendance is mandatory for conferences and seminars; simulation and other labs; practica; and scheduled examinations, including comprehensive examinations.

Each student is required to attend and participate in all clinical assignments and rotations throughout the degree program. Each student has ten days available during each academic year of the educational program (ie, 10 days in the first year and 10 days in second year) to use as sick days or as personal days.

The Program uses a timekeeping system to document clinical attendance. Regular reports are provided to each student so they are up to date the standing in relation to the 2500 clinical hours that are required by the Program.

CERTIFICATION IN THE UNITED STATES

The National Commission for Certification of Anesthesiologist Assistants [NCCAA] provides the certification process for anesthesiologist assistants in the United States. Initial certification is obtained by successfully completing the Certifying Examination for Anesthesiologist Assistants.

Because employment as an anesthesiologist assistant in almost every locale is contingent upon certification, it is a requirement of the Anesthesiology Program that each student apply for and take the Certifying Examination in his/her year of graduation (see page 45). Information regarding certification and examinations is available on NCCAA's web site, www.aa-nccaa.org.

CLINICAL ROTATIONS

Clinical rotations are scheduled in both academic and private practice hospitals, including hospitals within the Emory system, hospitals in metropolitan Atlanta, and out-of-town hospitals in Georgia and other states.

First-year Clinical Activity

During the first three semesters of the general track or during the first two semesters of the PA-C track, students progressively develop knowledge and skills in patient evaluation; vascular access; airway management; and clinical anesthesia. Each student is assigned to a single clinical site for a block of time (up to a semester). Clinical assignments are for partial days during each week so that clinical activity is interspersed with classroom work and laboratory sessions on a day-to-day basis.

Knowledge and skills to be obtained each month are outlined in a clinical task progression workbook. Three comprehensive examinations are administered each semester. Knowledge and clinical milestones must be met before the student may advance to the next semester. Failure to meet the milestones can result in retesting and/or remedial work and/or probation and/or extension of the degree program.

Senior Clinical Rotations

During the senior clinical year (final 12 months of both tracks), clinical rotations are assigned in two to four-week blocks. Clinical rotations include all subspecialty areas of anesthesia practice (general surgery, pediatrics, obstetrics, gynecology, orthopedics, neurosurgery, ophthalmology, genito-urinary surgery, vascular surgery, cardiac surgery, thoracic surgery, transplantation, trauma). Mandatory subspecialty rotations include pediatrics, obstetrics, cardiac, and preop.

Clinical Activity

For elective OR day schedules, the student is expected to be at his/her clinical site by 6:00 AM. The student is expected to allow sufficient time at the beginning of each clinical day to accomplish all of the following prior to entering the operating room with the patient:

- complete the anesthesia set up in the operating room
- perform the anesthesia apparatus checkout
- prepare all necessary monitoring
- prepare all needed drugs
- meet the patient with your preceptor
- review the anesthesiology consultation
- review the patient's current medical record
- review the patient's old chart (if available)
- perform all indicated vascular access
- administer preop medications, including antibiotics (if ordered)
- obtain blood for laboratory tests, if needed.

CLINICAL TASK PROGRESSION

The clinical task progression series is designed to prepare students in the first year for those clinical activities for which they will be expected to be safe and proficient when they enter their senior year. The **Clinical Anesthesia Workbook** contains the basic information needed to understand and complete each task: definition of task, source of information for task, references, and requirements for task completion. The student must have completed all tasks assigned within each semester in order to receive a clinical grade for that semester and be eligible to advance to the next semester.

CONDUCT

The student is responsible for his/her conduct at all times. A student's conduct can be reviewed at any time.

Misconduct – Clinical

In the practice of anesthesia, the safety and well-being of patients is every practitioner's first and foremost concern. The confidential acquisition and maintenance of patient data are also of paramount importance. To these ends, students must always appropriately interact with patients and patients' families, review medical records, and obtain and honestly record data.

The student is responsible for his/her conduct at all times. Conduct can be reviewed and the privilege of working with patients can be withdrawn at any time.

Examples of clinical misconduct include but are not limited to the following:

- o commission of a felony under local, state, or federal laws
- o deceit in verbal or written communications
- o drug abuse
- o failure to maintain patient data in an appropriate, honest, confidential manner
- o falsifying or intentionally misrecording data in a drug-reporting form, including but not limited to DEA forms for scheduled substances
- o falsifying or intentionally misrecording patient data in any medical record, including but not limited to the anesthesia record and preoperative consultation
- o forging data or signatures in a medical record or healthcare document
- o inappropriate behavior in a clinical setting
- o inappropriate interaction with a patient or patient's family
- o vandalism
- o violation of the Health Insurance Portability and Accountability Act
- o violation of conduct regulations of a healthcare facility while on rotation

Misconduct – Nonclinical

Examples of nonclinical misconduct include but are not limited to the following:

- o cheating – knowingly acquiring, receiving, or distributing information about the content of an examination prior to administration, during administration, or following administration if the content source of said examination is confidential and secure information; provision or utilization of unauthorized aids; impermissible collaboration
- o commission of a felony under local, state, or federal laws
- o deceit in verbal or written communications
- o falsification of attendance or evaluation records (signatures may be verified against signature cards)
- o falsifying or manipulating data in academic or research documents
- o forging data or signatures on any Program or University document
- o neglecting mandatory requirements for program and university compliance

- o plagiarism – incorporating into one’s own work, the work or expression of another without appropriately and adequately indicating the source
- o sabotage – intentional and malicious actions that impair another student’s academic performance
- o theft
- o vandalism

Monitoring and Reporting

The Master of Medical Science Program employs several methods for monitoring conduct, including but not limited to clinical evaluations, proctoring of examinations, video surveillance of examinations, written and verbal communications with faculty, staff, and clinical sites.

CONTINUATION, INTERRUPTION, TERMINATION OF THE MASTER OF MEDICAL SCIENCE PROGRAM

Continuation Requirements

The faculty’s judgement of a student’s suitability and fitness for continuation in the Program is based upon academic performance, clinical competence, and standards of conduct appropriate for a health professional, including trustworthiness; responsibility to duty; appropriate interaction with patients, patients’ families, and other healthcare professionals; and professional demeanor.

Advancement

The Progress and Promotions Committee reviews the grades, clinical performance, and conduct of each student at the end of every semester, and issues a progress and promotions statement to each student at the end of each semester. The Program Directors issue a progress and promotions letter at the end of the first year granting advancement into the senior clinical year.

In order to continue in the Master of Medical Science Program to the next semester or to graduate from the Master of Medical Science Program at the end of the sixth semester for general-track students or at the end of the fifth semester for PA-track students, a student must

- Receive a letter grade of C or above in every course;
AND
- Exhibit satisfactory clinical performance as judged by the faculty of the MMSc Program;
AND
- Have conduct and ethical behavior that in the judgement of the MMSc Program faculty meets those standards essential for an anesthesiologist assistant practitioner.

If a student meets any of the following criteria within a semester, then that student shall be dismissed from the Master of Medical Science Program:

- Receipt of three or more grades below C;
OR
- Receipt of one D or one F following return from a leave of absence for academic reasons;
OR
- Clinical performance judged to be unsatisfactory by the faculty of the MMSc Program;
OR
- Conduct or ethical behavior that in the judgement of the MMSc Program faculty does not meet the standards essential for an anesthesiologist assistant practitioner.

If a first-year student meets either of the following criteria within a semester, then that student shall be offered a leave of absence for academic reasons and the opportunity to return to the MMSc Program for remedial work:

Receipt of D in one or two courses;

OR

Receipt of F in one course.

For senior students, receipt of a D in the clinical series (ANES 660A,B,C; ANES 670A,B,C) will result in probation and automatic extension of the educational program by one semester. In order to continue in the MMSc Program beyond the semester in which the D was received or in order to graduate from the MMSc Program, then that student must meet the following requirements:

Receive a letter grade of C or above in all subsequent clinical courses (ANES 660A,B,C; ANES 670A,B,C);

AND

Maintain a semester GPA of 2.0 or higher in all subsequent semesters;

AND

Have an overall GPA of 2.0 or higher at the end of all subsequent semesters;

AND

Meet all other Program requirements for continuation.

Leave of Absence for Academic Reasons

The didactic curriculum of the Master of Medical Science Program is scheduled over the twelve continuous months of the first year of the educational program. The senior clinical year of the educational program is comprised of two-week to one-month clinical rotations throughout the United States, plus a weekly seminar and a weekly case conference. Anesthesiology didactic courses and basic science didactic courses are scheduled on an annual basis and offered only one time each year.

Any course that is prerequisite for a subsequent course must be completed successfully before the student may advance to the next semester. All didactic courses must be successfully completed before a student may advance to the senior year.

Successful completion of didactic courses requires that the student receive a letter grade of C or above. A letter grade of D or F in any course requires that the student repeat the course in which he/she made the D or F.

Since the didactic curriculum is tightly integrated and courses are offered only once each year, the student receiving a D or an F in any course during the first year will be offered an opportunity to take a leave of absence from the Master of Medical Science Program effective at the end of the semester in which he/she received the D or F. That student may then return to the Master of Medical Science Program the following fall semester to restart the educational program.

If the student elects to return to the Master of Medical Science Program, then he/she must meet the Program's requirements for continuation.

Resignation or dismissal from the MMSc Program is the alternative to taking leave and returning.

Financial Aid Implications

Within three days of taking a leave of absence as described above, the student must contact the Financial Aid Office of Emory University and make all necessary arrangements concerning financial aid and repayment of same. In general, the following rules apply to the student taking leave:

- o When leave is taken, loans will become due at six months following the end of the student's enrollment (ie, the grace period ends).
- o When the student returns two semesters later, in order to be eligible for financial aid, he/she must be enrolled for at a minimum of six credit hours (one-half of the University's full-time designation for the MMSc Program) AND the course or courses that are being retaken cannot be counted in the total credit hours needed to be eligible for financial aid.

The above information is general information. The student should contact Emory's Office of Financial Aid for complete information and to obtain specific answers to questions regarding financial aid and leave of absence.

Interruption of Degree Program

Medical Leave

A student may petition the Program for interruption of his/her degree program for an acute, serious medical problem. In the petition, the student must provide documentation of diagnosis by a physician licensed to practice medicine in the United States and an estimate by that physician of a time to recovery sufficient to resume the degree program. Granting the petition for interruption in the degree program is solely at the discretion of the Anesthesiology Program.

Leave of Absence

First Year

A student in good standing may petition the Program for a leave of absence by submitting the request in writing, including a complete explanation for the leave. If a leave of absence is granted, leave shall be for the balance of that academic year. The student must return as a full-time student in the next academic year at the beginning of the semester in which he/she was granted leave. Tuition refund for the semester in which the leave of absence is granted shall follow University guidelines for cancellation and withdrawal. Granting a petition for a leave of absence is solely at the discretion of the Anesthesiology Program.

Senior Year

A student in good standing may request a leave of absence by submitting the request in writing, including a complete explanation for the leave. Following review of the request, the Program Director may grant a leave of absence for one to six months at the end of which the student must return as a full-time student at the beginning of an approved clinical rotation. The full one to six months of absence must be satisfactorily completed on approved clinical rotations in order for the student to meet academic and residence requirements for degree eligibility. Tuition refund for the semester in which the leave of absence is granted shall follow University guidelines for cancellation and withdrawal. Registration and payment of tuition and fees for the extended clinical time in the degree program shall follow University guidelines. Granting a petition for a leave of absence is solely at the discretion of the Anesthesiology Program.

Termination Prior to Completion of Degree

Cancellation

Registration may be cancelled during the first five days of classes without transcript deficiencies or financial penalty other than loss of deposit.

Withdrawal

A student may voluntarily withdraw from Emory University after the first week of classes. Official withdrawal requires completion and approval of withdrawal forms, which are available from the Office of Medical Education and Student Affairs in the School of Medicine. In the case of voluntary withdrawal, tuition refund will be prorated by the Office of the Bursar. No refund will be given after the fifth week of classes. No refund will be given for reduced course load.

Dismissal

A student may be dismissed from the Anesthesiology Program at Emory University for academic deficiency, for clinical deficiency, or for violation of standards of conduct (see CONDUCT, page 14). No refund will be given to a student who is dismissed.

Involuntary Withdrawal from Emory University

Emory University considers the safety and welfare of its students, faculty, and staff a top priority. The Involuntary Withdrawal Policy and Procedure of Emory University is not a disciplinary code, policy, or process. It applies when a student's observed conduct, actions, and/or statements indicate a direct threat to the student's own health and/or safety or a direct threat to the health and/or safety of others. The Dean of the School of Medicine has final authority regarding the decision, enactment, enforcement, and management of the involuntary withdrawal of a student.

COUNSELING RESOURCES

Academic counseling is available from or through the Anesthesiology Program and through Emory University. If a student receives a grade of D or lower on an examination or has a projected grade of D or lower in any course, then that student must meet with his/her faculty preceptor within five days to review course work and overall performance in the educational program.

CURRICULUM

The Master of Medical Science Program in Anesthesiology offers two admissions tracks – a general track for individuals holding a baccalaureate degree from an accredited institution of higher learning in the United States and a PA-C track for certified primary care physician assistants who have completed their basic science courses at the masters level. Course work and clinical rotations are designated below for these tracks. In an ongoing effort to optimize the educational experience for all students, curriculum for both tracks is dynamic. Individual courses and clinical rotations are subject to change name, number, semester offered, and location.

Course Descriptions

Required Anesthesiology Courses

ANES 505A. Instrumentation/Physiology/Pharmacology Lab I. General track.

Fall. Credit 1 hour. Basic and advanced monitoring systems. Bench and computer-based instruction and testing of cardiovascular, respiratory, neuro, neuromuscular, and renal physiology and pharmacology. Gowning and gloving; suturing; sterile fields. Includes an entry-level examination on medical terminology, symbols, medical word formation, disease terms, abbreviations, and procedures.

ANES 505B,C. Instrumentation/Physiology/Pharmacology Lab II, III. Both tracks.

Spring, Summer. Credit 1 hour each. Basic and advanced monitoring systems. Bench and computer-based instruction and testing of cardiovascular, respiratory, neuro, neuromuscular, and renal physiology and pharmacology.

ANES 512A,B. Principles of Airway Management I, II. Both tracks.

Spring, Summer. Credit 1, 2 hours. Structure, function, pathophysiology, and diseases of the human airway. Basic and advanced principles of elective and emergent airway management, including equipment and techniques.

ANES 513. Anesthesia Delivery Systems and Equipment. Both tracks.
Spring. Credit 2 hours. Compressed gases, gas distribution systems, anesthesia machines, breathing circuits, anesthesia ventilators, waste-gas scavenging, respiratory care equipment, resuscitation equipment.

ANES 516A,B. Pharmacology in Anesthesia Practice I, II. Both tracks.
Spring, Summer. Credit 1 hour each. Drugs specifically related to the practice of anesthesia, including inhaled anesthetics, narcotics, barbiturates, benzodiazepines, anticholinesterases and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists.

ANES 530. Physics for Anesthesia Practice. Both tracks.
Fall (General track), Spring (PA-C track). Credit 2 hours. Physical principles and processes applied to the practice of anesthesia. Dimensional analysis; work, energy, and power; gas laws; fluid mechanics; heat transfer; vaporization; solubility, diffusion, and osmosis; fires and explosions; laser and x-ray radiation; applied electric circuit theory; time constants.

ANES 535A,B. Principles of Monitoring and Instrumentation I, II. Both tracks.
Spring, Summer. Credit 2 hours each. Principles, applications, and interpretation of monitoring used in anesthesia practice: electrocardiography; invasive and non-invasive blood pressure; oximetry; cardiac output; hemodynamic calculations; respiratory gases; ventilation; ICP; electroencephalography; temperature; renal function; neuromuscular blockade; ultrasound; echocardiography; point-of-care instrumentation.

ANES 536A. Anesthesiology Practice I. Both tracks.
Fall (General track), Spring (PA-C track). Credit 2 hours. History of anesthesia; types of anesthesia; anesthesia care team model; universal precautions and infection control; OR layout and anesthesia setup; AA practice and professionalism; intravenous catheterization; intravenous fluids; arterial cannulation; ASA-standard monitors; induction, maintenance, and emergence from anesthesia.

ANES 536B,C. Anesthesiology Practice II, III. Both tracks.
Spring, Summer. Credit 4 hours each. Systems-based approach to physiology and pathophysiology in anesthesia practice, including applications and effects of general and regional anesthesia. Emphasizes the integration of preoperative evaluation, planning, and anesthetic management for surgical patients. Includes risk management and critical incidents in anesthesia.

ANES 540. Clinical Methods. General track.
Fall. Credit 2 hours. Preoperative patient evaluation, including history taking, physical examination, chart review, and select laboratory, radiologic, and other testing. Basic EKG interpretation.

ANES 561A,B,C. Clinical Anesthesia I, II, III. General track.
Fall, Spring, Summer. Credit 2 hours each. Foundations of the clinical practice of anesthesia gained through one-on-one supervised instruction in the operating room and other clinical locations.

ANES 570A,B. Clinical Anesthesia I, II. PA-C track.
Spring, Summer. Credit 2 hours each. Foundations of the clinical practice of anesthesia gained through one-on-one supervised instruction in the operating room and other clinical locations.

ANES 611A,B,C. Senior Seminar in Anesthesia. Both tracks.
Fall, Spring, Summer. Credit 1 hour each. Student case presentations. Selected topics in hazards and complications. Literature review.

ANES 660A,B,C. Clinical Anesthesia I, II, III. General track.
Fall, Spring, Summer. Credit 10 hours each. Clinical rotations in anesthesia, including all subspecialty areas; preop clinic; and acute pain service.

ANES 670A,B,C. Clinical Anesthesia I, II, III. PA-C track.
Fall, Spring, Summer. Credit 14 hours each. Clinical rotations in anesthesia, including all subspecialty areas; preop clinic; and acute pain service.

ANES 692A,B,C. Anesthesiology Conference. Both tracks.
Fall, Spring, Summer. Credit 1 hour each. Lectures, discussions, and case presentations by faculty, staff, and students. Occurs at all clinical rotation sites.

Elective Anesthesiology Courses

Electives are available to students in both tracks of the program.

ANES 596R. Individual Tutorial
Each semester. Credit variable. Provides opportunity for in-depth study of a curricular topic under the direction of a faculty member.

ANES 597R. Individual Directed Study
Each semester. Credit variable. Provides opportunity for in-depth study of a non-curricular topic under the direction of a faculty member.

ANES 695R. Individual Clinical Practicum
Each semester. Credit variable. Provides opportunity for clinical experience in a subspecialty area under the direction of a faculty member.

ANES 697R. Individual Directed Study
Each semester. Credit variable. Provides opportunity for advanced study under the direction of a faculty member.

ANES 699R. Individual Research
Each semester. Credit variable. Provides opportunity for laboratory or clinical research under the direction of a faculty member.

Required Basic Science Courses

Basic science courses are taught in their respective departments in the Emory University School of Medicine.

BAHS 500. Anatomy. General track.
Fall Semester. Credit 4 hours. Gross anatomy and histology. Anatomical terms, structures, and relationships emphasizing functional significance in problem-solving situations. Laboratory provides demonstrations on models and prosections.

BAHS 502. Physiology. General track.
Fall semester. Credit 4 hours. Systems approach to normal function of the human body, including relevant information on anatomy. Weekly problem solving sessions, regular laboratory exercises, and clinical application to systemic disorders.

BAHS 504. Pharmacology. General track.
Spring Semester. Credit 3 hours. Basic principles of drug action; absorption, distribution, metabolism, and excretion of drugs; mechanisms of drug action; toxicity. Basis for the use of medicines in pharmacologic therapy of specific diseases.

DRESS CODE

Attire at all times outside the operating room is business casual, which should be comfortable but not detract from the serious educational atmosphere or from the climate of patient care. Students should avoid attire that could be offensive to the public, peers, patients, or patients' families.

Each student shall be dressed appropriately in business casual attire whenever he/she is in any patient care environment, including entering and leaving the hospital. For clinical rotations in the operating room, appropriate attire always includes clean scrubs with Program and EUSM identification visible at all times. In certain clinical facilities, clean scrubs with a white coat may be worn for short periods outside the operating room (eg, breaks, patient transport).

Scrubs are not to be routinely worn outside the operating room. Scrubs may NOT be worn to and from clinical sites, to and from classes, or in classes. Each day that a student appears in scrubs (top and/or bottom) in the Program facility at Executive Park, he/she will have one point deducted from his/her clinical grade for that semester.

For clinical rotations outside the operating room (eg, Preop Clinic, Pain Service), appropriate attire is always business casual and white coat with Program and EUSM identification visible.

EMPLOYMENT DURING THE PROGRAM

The schedule of studies and clinical activities of the Anesthesiology Program requires full-time engagement of each student. Employment during any part of the educational program may interfere with studies and clinical work and seriously jeopardize a student's ability to complete the degree program. Any student contemplating employment for any reason should discuss the matter with a Program Director before undertaking employment.

EQUIPMENT AND CLOTHING REQUIRED

Clinical experience begins in the first week and continues throughout the educational program. Labs and practicums occur frequently during the first year. Therefore, each student is required to have the following equipment with them every day:

- stethoscope
- pen light
- ruler
- clean, short, white coat with an Emory AA Program patch
- student identification from Emory University
- student identification from the Anesthesiology Program
- solid-color scrubs for labs

Scrubs

Scrubs will be required for some labs and some practicums. Since scrubs are not to be worn to and from the Program Office at Executive Park, each student should purchase and keep one clean set of scrubs at Executive Park throughout the first year.

EXAMINATIONS

The Anesthesiology Program administers two different types of examinations – examinations within courses and comprehensive examinations. The purposes for these two types of examinations are distinctly different.

Course instructors will publish their examination policy, including the purpose of examination, as part of their course syllabus, which will be distributed to all students no later than the first day of class.

Basic science courses schedule and administer examinations independently of the Anesthesiology Program.

Comprehensive Examinations

Three comprehensive examinations are administered each semester throughout the program. The purpose of the comprehensive examinations is two-fold – to evaluate each student's progress in developing the knowledge, skills, and clinical judgement requisite to becoming an anesthesiologist assistant practitioner and to help prepare the student for the national Certifying Examination.

Performance on comprehensive examinations constitutes part of the clinical grade for each semester. Each comprehensive examination contains questions on critical clinical concepts. The critical concept questions are more heavily weighted questions on each examination.

FACULTY AND STAFF

A current listing of faculty and staff for the Anesthesiology Program, as well as select faculty and staff for the Department of Anesthesiology and the School of Medicine, can be found on BlackBoard and the program's website.

FINANCIAL AID

Financial aid information about loans, scholarships, and deferred payments is available from Emory University's Office of Financial Aid: 404 727 6039 and www.emory.edu/financial_aid. Information about tuition loans can be obtained from the Office of Medical Education and Student Affairs (404 727 5655). Student financial aid requests must be made annually. Rejection for financial aid for the first year does not necessarily mean that financial aid will not be available during the second year. Likewise, an award of financial aid for the first year does not guarantee financial aid for the second year.

GRADING AND REPORTING

Lecture Course Grades

Each course instructor is responsible for calculating, assigning, and reporting grades for his/her course. If a student has a question about the grade assigned for a course, the student should send his/her question in writing or email to that course's instructor.

Laboratory Course Grades

Student performance in the laboratory is based on the following:

- attendance, including tardiness and continued presence
- preparation for the scheduled lab
- understanding and applying procedures
- understanding and operating equipment
- understanding and applying principles of physiology, pharmacology, monitoring, clinical methods
- desire to learn
- participation
- conduct

Conference Course Grades

Student performance in conferences is based on the following:

- attendance, including tardiness and continued presence
- understanding topics
- desire to learn
- participation
- conduct.

Seminar Course Grades

Student performance in seminars is based on the following:

- attendance, including tardiness and continued presence
- preparation
- quality of presentations
- understanding topics
- desire to learn
- participation
- conduct.

Clinical Course Grades

Clinical anesthesia training begins during the first week and continues through the last week of the program. Clinical anesthesia training is a continuum during which evaluations occur daily, weekly, and monthly – depending upon the evaluation tools. Comprehensive examinations that include clinical anesthesia material are administered three times each semester for every semester of the program. Clinical course grades are based on weighting of clinical evaluations and comprehensive examinations.

Daily Clinical Attendance and Evaluations

Student performance in clinical is based on the following:

- attendance, including tardiness and continued presence
- knowledge
- skills
- multitasking
- problem solving
- desire to learn
- participation
- conduct
- overall performance.

Clinical evaluations are performed on a daily basis for each student on a clinical rotation. The clinical evaluation system utilizes a daily evaluation form for which the student is responsible for submission to the Program Office.

Comprehensive Examinations

Comprehensive examinations are administered three times each semester of the degree program. Examinations contain objective and subjective items. Coverage of each examination includes material from clinical task objectives, a schedule of reading assignments, and the general fund of knowledge of the practice of anesthesia. Following final scoring of a comprehensive examination, a score report and keywords will be provided to each examinee for those items missed on the examination. It is the expectation of the Program faculty that each student will utilize his/her keywords to read and review material, remediate deficiencies, and prepare for subsequent comprehensive examinations.

Grade Scale

The following letter grades, their indication of performance, and assigned quality points are used by the Anesthesiology Program:

A	excellent	4
B	above average	3
C	average	2
D	below average	1
F	failing	0 - no course credit or residence credit
W	withdrawal without penalty	0 - no course credit or residence credit
WF	withdrawal while failing	0 - no course credit or residence credit
S	satisfactory	
U	unsatisfactory	0 - use restricted to certain courses
P	in progress	course extends beyond one semester
I	incomplete	assigned work has not been satisfactorily completed

Transcripts

Official transcripts are available from the Office of the Registrar. The Anesthesiology Program does not provide official transcripts to students or to third parties.

GRADUATION REQUIREMENTS

The faculty's judgement of a student's suitability and fitness for graduation is based not only scholastic achievement but also upon the student's character, physical abilities, and interaction with patients, patients' families, and other healthcare professionals. Eligibility for the Master of Medical Science degree from the Anesthesiology Program includes the following:

- o Residence of six semesters for General Track or five semesters for PA-C Track.
- o Satisfactory completion of all didactic and clinical work.
- o Passing scores on all comprehensive examinations.
- o Continued demonstration of ethical and moral behavior.
- o Adherence to all federal, state, and local laws, especially those pertaining to substance abuse. Adherence to the rules and regulations of all institutions in which students have clinical rotations, especially those rules and regulations pertaining to patient care and confidentiality of medical records.

HEALTH REQUIREMENTS

Given the emergence of new infective organisms and the rapidity with which some communicable diseases spread, policies stated in this edition of the Student Handbook may be superceded at any time by more applicable policies of Emory University, Emory Healthcare, Emory University School of Medicine, or the Master of Medical Science Program.

History and Physical Examination

A recent medical history and physical examination recorded on University forms must be on file in the Emory University Health Service and in the Program Office prior to registration for the first semester. An updated medical history and physical examination are required prior to re-enrollment following an absence of one year or longer. Following a medical leave of absence of any duration, an updated medical history and physical examination, as well as a clearance for the reason for the medical leave, are required prior to re-enrollment.

Immunizations

For health and safety of students, patients, and others with whom the student may come in contact, the Emory University School of Medicine has established the following requirements for immunizations, laboratory measurements, and surveillance:

DISEASES	INITIAL DOCUMENTATION REQUIREMENT	FOLLOWUP ALTERNATIVES	SURVEILLANCE & EXPOSURE REQUIREMENTS
tetanus, diphtheria (Td)	immunization within past 10 years	vaccination	
measles, mumps, rubella (MMR)	original vaccine + one booster if born after 1957	vaccination series	
polio	childhood vaccination with appropriate boosters	vaccination series	
hepatitis B	previous immunization <u>or</u> 3-dose vaccination series	serology (Declination forms will be available to students for whom the immunizations are contraindicated.)	follow EU protocol for hepatitis B exposure
varicella	history of chicken pox <u>or</u> positive varicella titer	2-dose vaccination for negative serology	
tuberculosis (TB) [§]	documentation of negative PPD within past 3 months <u>or</u> PPD skin test at matriculation	positive PPD requires CXR every 6 months and physician monitoring	PPD every 6 months while PPD-negative; CXR every year if PPD-positive; follow EUHS protocol for MDR TB exposure
[§] Previous BCG administration does not exempt PPD testing.			

Each student must maintain a current immunization schedule on file in the Program Office. Failure to have a current immunization schedule will result in the student's being immediately withdrawn from clinical assignments until immunization records are brought up to date.

Communicable Diseases and Infection Control

At matriculation, each student must undergo education provided by Emory University School of Medicine pertaining to infection control. Prior to beginning any clinical assignment, each student must have a Student Infection Control Education Verification form completed and on file in the Program Office.

Throughout the degree program, each student is expected to utilize universal precautions and to comply with all OSHA-mandated safety requirements and always use OSHA-mandated protection equipment and disposables.

In the event of exposure to known or suspected pathogenic organisms, the student should follow the protocols established by the clinical site at which the exposure occurred and by the Emory University School of Medicine.

Tuberculosis

PPD Testing

PPD testing is provided through the Emory University Health Service. Students should provide one copy of each PPD test result to the Program Office and retain one copy for their files.

PPD Conversion

During full-time enrollment in the Program, any student who undergoes PPD conversion will be referred to the Emory University Health Service for followup. Emory University School of Medicine will provide appropriate followup for students who convert and who follow the EUHS PPD-conversion protocol. Questions on this matter should be directed to the Office of Medical Education and Student Affairs.

Guidelines for Students Infected with HIV, Hepatitis B, or Hepatitis C

Any student who is infected with human immunodeficiency virus (HIV) or with hepatitis C virus or who is hepatitis B virus "e" antigen positive must notify the Program Office and the Office of Medical Education and Student Affairs of his/her positive status. The Executive Associate Dean for Medical Education and Student Affairs or his/her designee will help define any limitations necessary on clinical activities and make such accommodations as may be reasonable to permit the student's continued enrollment. Monitoring of the student, including laboratory and other tests that are indicated, shall be determined by the Dean, who shall, as necessary, reassess the student's status and define the limitations on the student's clinical activities.

The Dean will make recommendations on a case-by-case basis utilizing the best currently available scientific knowledge, recommendations from the Centers for Disease Control and Prevention, and other applicable governmental guidelines, as to what, if any, limitations need to be applied to the student's clinical activity. In conducting this evaluation and making such recommendations, the Dean will consult with the student, the student's personal physician, the Program Directors, and others, including faculty of the School of Medicine, as the Dean determines appropriate to assist in this individualized judgment. Within the parameters of existing law, the student's confidentiality will be maintained during this process.

Evaluations and recommendations will be made with the knowledge that the practice of anesthesiology – and clinical activities of anesthesiologist assistant students – involve continual patient contact and require performance of invasive procedures.

Reasonable efforts to assist the student in completing the requirements for the Master of Medical Science degree will be made by the School of Medicine. In addition, the student will be offered counseling concerning options for selecting an alternative career pathway if the student should so choose.

HEALTH AND MENTAL HEALTH SERVICES

Emory University Student Health Service

The Emory University Student Health Service [EUSHS] is located at 1525 Clifton Road on the main Emory campus. Complete information about EUSHS services can be found at www.emory.edu/UHS.

EUHS is responsible for receiving and approving each student's history and physical examination at matriculation. EUHS maintains each student's immunization record.

Mental Health Services

Complete information about mental health services and counseling can be found at www.emory.edu/UHS.

HOLIDAYS

Actual dates for holidays, vacations, examinations, and the beginning and end of each semester are posted in the Program Office. The schedule for Emory University's nine holidays can be found at www.emory.edu:

New Years Day (during Christmas break)
Martin Luther King, Jr. Day (during Spring Semester)
Memorial Day (during Summer Semester)
Independence Day (during Summer Semester)
Labor Day (during Fall Semester)
Thanksgiving (2 days during Fall Semester)
Christmas (2 days during Christmas break)

Seniors on clinical rotations should conform to the holiday schedule at their rotation site.

HOUSING

Housing information is available from Emory's Office of University Housing: www.housing.emory.edu.

IDENTIFICATION

Picture IDs are provided by Emory University School of Medicine and by the Anesthesiology Program. Both IDs must be worn at all times either on the student's white coat or on scrubs. The student's picture and name on the front side of the Anesthesiology Program ID must be visible at all times. Failure to wear both IDs or failure to have the Anesthesiology Program ID visible can result in dismissal from class or from clinical with resulting grade penalty.

INSURANCE

Disability Insurance

Long-term disability insurance is provided to students who are enrolled full-time in the Emory University School of Medicine. Payment of premium for this insurance is made from the student's semester payment of the EUSM preventive health/disability insurance fee. The coverage is portable, and the student may elect to extend coverage by completing appropriate forms at the same time application is made for degree. A copy of the policy and specifics concerning coverage will be provided to students at matriculation.

Health Insurance

Students in the Anesthesiology Program at Emory University are required to have continuous health insurance coverage in force for the duration of their enrollment. Complete information about insurance requirements, including information about the waiver process, can be found at www.emory.edu/UHS. Each student must have a copy of his/her health insurance coverage on file in the Program Office before beginning any clinical assignments. No student will be allowed to begin clinical assignments until a copy of their current health insurance coverage is on file in the Program Office.

Liability Insurance

Full-time students in Emory University School of Medicine are covered by liability insurance while they are on assigned clinical rotations. Students do NOT have liability insurance coverage during clinical or nonclinical employment or during participation in programs that are not assigned as part of the Master of Medical Science Program in Anesthesiology.

LEAVE

It is each student's responsibility to request leave from the Program Office. Any and all types of leave must be requested in writing using the Request to be Absent form which must be submitted to the Educational Program Coordinator. Leave, like all other absences from the degree program, is tracked by the Program Office. Every clinical absence must be made up, regardless of what type of leave is granted.

Requests for Leave

A Request to be Absent form must be submitted and approved for each and every type of leave. Failure to submit and receive approval for leave will result in the time being counted as an unexcused absence with the application of appropriate penalties. See Request to be Absent form on page 49.

MEETINGS

Students may attend professional anesthesiology meetings during the first and second years of the educational program. Credit for clinical time will be awarded for attendance at the annual meetings of the American Academy of Anesthesiologist Assistants and the American Society of Anesthesiologists and the semiannual meetings of the Georgia Society of Anesthesiologists. In order to receive clinical hours of credit, the student must provide a complete, legible copy of the CME certificate awarded by the AAAA, ASA, or GSA. The student will be granted clinical hours equal to the number of CME hours which they received for the meeting.

PRACTICE OF ANESTHESIA

Personal Risks Associated with the Practice of Anesthesia

Exposure to Pathogens

Anesthesiologist assistants, physicians, nurses, and other healthcare providers that have direct contact with patients are at risk for occupational exposure to pathogenic organisms. Exposure can occur via contact with blood and other body fluids and tissues; air-borne and droplet transmission; needle stick or other penetration of skin.

The Anesthesiology Program and Emory University School of Medicine promote the safety and well-being of students as follows:

The Program and other departments and divisions in Emory University School of Medicine provide mandatory training in universal precautions and other work-safety practices.

All clinical training sites provide students on rotation with the OSHA-mandated safety and protection equipment and disposables.

In the event of exposure to known or suspected pathogenic organisms, the student is entered into a protocol established by Emory University through the Emory University Health Service and/or the protocol established by the clinical site at which the exposure occurred.

Substance Abuse

Both anesthesiologists and anesthetists are at greater risk for substance abuse than practitioners in other medical specialties or individuals in the general population. Handling and administering controlled substances occurs daily in the practice of anesthesia, and current literature suggests that individuals with a history of substance abuse of any kind are more likely to develop a drug abuse problem if they enter the field of anesthesiology.

If at any time during your enrollment in the degree program, you realize that you are using alcohol excessively or that you are suffering from any other form of drug abuse, you must contact a Program Director immediately so that appropriate followup can be instituted.

Exposures During Pregnancy

Certain risks exist for gravid women in healthcare environments, including exposure to communicable diseases (eg, cytomegalovirus) and exposure to anesthetic gases and vapors. The Anesthesiology Program will make every effort to minimize risks for gravid students. Any student who knows or has reason to believe that she is pregnant should speak with one of the Program Directors as soon as possible. The Program will review the student's clinical assignments, make indicated changes, and inform the clinical sites.

Technical Standards

To undertake and successfully complete the Anesthesiology Program, as well as successfully function as an anesthetist after graduation, requires that an individual meet certain fundamental physical, cognitive, and behavioral standards. The requisite technical skills include but are not limited to the following:

- o Effectively communicating verbally with patients and their family members and with other healthcare professionals.
- o Interacting with patients, including obtaining a history and performing a physical examination.
- o Effectively communicating in writing and by record keeping those data and information essential to the practice of anesthesia and the care of patients, in general.
- o Reading and comprehending written parts of the medical record and other patient care documents in order to safely and effectively participate in the practice of anesthesia.
- o Having sufficient knowledge, motor skills, and coordination to perform diagnostic and therapeutic tasks, including invasive procedures, on patients in a timely manner so as to insure the safety and well-being of the patients. These tasks include but are not limited to peripheral and central venous catheterization, arterial puncture and cannulation, bag-and-mask ventilation, laryngeal mask airway insertion and management, endotracheal intubation.
- o Having sufficient strength, motor skill, and coordination to lift, move, and position patients as required for administration of anesthesia and performance of cardiopulmonary resuscitation.
- o Having sufficient speed and coordination to quickly and safely react to emergent conditions throughout the hospital in order to assure patient safety.
- o Recognizing and differentiating colors of signals displayed on monitors; being able to work in both *light* and *dark* conditions as exist in patient care areas (eg, operating room, radiology suite, endoscopy suite); being able to recognize details of objects both near and far.
- o Hearing, processing, and interpreting multiple conversations, monitor signals, alarms, and patient sounds simultaneously in fast-paced patient care settings (eg, operating room, intensive care unit, emergency room).
- o Having no impairment that would preclude continuous performance of all of the above activities or any and all of the other activities that are an integral part of an anesthesiologist assistant's participation in the anesthesia care team.

If at any time during your enrollment in the degree program, you realize that you are unable to meet any of the above technical standards, you must contact a Program Director immediately so that appropriate followup can be instituted.

PROFESSIONAL ORGANIZATIONS

AAAA

The American Academy of Anesthesiologist Assistants is the national professional organization for anesthesiologist assistants. AAAA provides a forum for scientific, academic, educational, and professional activities. Membership is open to both AA students and AA practitioners. Information about the AAAA and membership in the AAAA can be found on the AAAA web site: www.anesthetist.org.

ASA

The American Society of Anesthesiologists is an educational, research, and scientific association organized to raise and maintain the standards of the medical practice of anesthesiology and improve the care of patients. Educational membership is open to both AA students and AA practitioners. Information about the ASA and membership in the ASA can be found on the ASA web site: www.asahq.org.

TRANSPORTATION

Students are responsible for all transportation costs, including parking, for all educational activities and clinical rotations within the Program. This student responsibility includes transportation in metropolitan Atlanta, in the State of Georgia, and in other states.

TUTORING

First-year students who are determined by one or more course directors to be having academic difficulty are eligible for tutoring. The Program will pay for a student's tutoring in a basic science course when academic difficulties results in exam scores of D or F. Tutoring can be arranged upon request by discussing the academic problem with the Academic Program Director. Tutoring is provided by graduate students majoring in the field of study for which they are tutoring. Tutors are available for any student at the student's expense.

VACATION

Fall Semester

Thanksgiving break includes Wednesday through Sunday.

Christmas break is approximately two weeks in December with return to class and clinical being the first weekday following New Years Day.

Spring Semester

Spring semester contains approximately one week of vacation.

Summer Semester

Summer semester contains approximately one week of vacation.