UNIVERSITY OF JUSTICE

DEPARTMENT: Anesthesiology

Associate of Science (A.S.) in Anesthesia Technology Degree Plan

CREDENTIAL: Associate of Science (A.S.)

Duration: 2 Years (4 Semesters)	**Total Credits: 60 SCH**	**Delivery: Blended (Online/On-Campus)**	**Clinical Practicum: 540 Hours**

1. Executive Summary and Institutional Rationale

The University of Justice, recognized for its leadership in clinical healthcare, forensic medicine, and legal compliance, establishes the Associate of Science (A.S.) in Anesthesia Technology degree program. Modern operating rooms, trauma centers, ambulatory surgical centers, cardiac suites, and labor/delivery units face a critical demand for highly competent, technically fluent, and legally literate Anesthesia Technologists.

This 2-year degree program bridges complex biomedical technology, pharmacological sciences, perioperative patient care, and surgical risk management. Students master anesthesia delivery systems, hemodynamic monitoring, airway management assistance, autotransfusion operations, sterile processing, and emergency resuscitation alongside licensed Anesthesiologists and Certified Registered Nurse Anesthetists (CRNAs). Graduates are prepared to sit for the ASATT Certified Anesthesia Technologist (Cer.A.T.T.) national examination.

2. Program Learning Outcomes (PLOs)

- **Manage Anesthesia Equipment & Instrumentation:** Prepare, calibrate, troubleshoot, clean, and maintain anesthesia delivery machines, vaporizers, mechanical ventilators, physiological monitors, and autotransfusion devices.
- **Assist in Advanced Airway Management:** Prepare and assist licensed anesthesia providers with difficult airway interventions, fiberoptic intubations, video laryngoscopy, laryngeal mask airways (LMAs), and rapid sequence inductions (RSI).
- **Operate Invasive Hemodynamic & Diagnostic Monitoring:** Setup, calibrate, zero, and assist with arterial lines, central venous pressure (CVP) catheters, pulmonary artery catheters, point-of-care blood gas analysis (ABG), and thromboelastography (TEG).
- **Apply Perioperative Pharmacology & Sterile Asepsis:** Manage anesthetic agents, neuromuscular blockers, emergency resuscitation drugs, IV fluids, blood products, aseptic sterile fields, and infection control standards.
- **Navigate Legal, Ethical, & Crisis Protocols:** Apply HIPAA, medical liability laws, informed consent, operating room safety (OSHA/AORN standards), and Malignant Hyperthermia / Cardiac Arrest resuscitation protocols.

3. Admissions Requirements

- **Educational Background:** High School Diploma or GED equivalent with a minimum cumulative GPA of 2.5.
- **Prerequisite Coursework:** High school or college-level Chemistry, Biology, and Algebra with a minimum grade of 'C'.
- **Background Clearance:** Comprehensive criminal background check and 10-panel drug screening mandatory prior to clinical operating room placements.
- **Health Clearance & Immunizations:** Complete physical examination, Hepatitis B series (with titer proof), MMR, Varicella, Tdap, annual Tuberculosis (PPD/QuantiFERON) clearance, and AHA BLS Certification.

4. Comprehensive 2-Year (60 Credits) Curriculum Structure

The curriculum is structured across four continuous academic semesters blending foundational general education, advanced biomedical sciences, intensive simulation laboratory courses, and 540 contact hours of clinical operating room practicum (Total: 60 Credit Hours).

SEMESTER 1: GENERAL ACADEMIC FOUNDATIONS & BASIC ANATOMY (15 CREDITS)	
BIOL 2401: Human Anatomy & Physiology I with Lab	**4 Credits**
In-depth study of cellular biology, tissue histology, musculoskeletal, nervous, and endocrine systems with laboratory dissections.	
CHEM 1405: General Chemistry for Health Sciences with Lab	**4 Credits**
Principles of inorganic, organic, and biological chemistry, stoichiometry, gas laws, solutions, and acid-base equilibrium.	
ENGL 1301: Composition I	**3 Credits**
College-level expository writing, scientific literature analysis, research synthesis, and academic documentation.	
MATH 1314: College Algebra and Medical Dosage Mathematics	**3 Credits**
Algebraic functions, logarithmic equations, metric conversions, ratio-proportion, and physiological dosage calculations.	
VNSG 1119: Orientation to Anesthesia Technology & Medical Terminology	**1 Credit**
Introduction to the role of the Anesthesia Technologist, operating room etiquette, medical terminology, and professional ethics.	

SEMESTER 2: ADVANCED PHYSIOLOGY, PHARMACOLOGY & INSTRUMENTATION (15 CREDITS)	
BIOL 2402: Human Anatomy & Physiology II with Lab	**4 Credits**
Detailed analysis of cardiovascular, respiratory, renal, digestive, and immune systems with focus on cardiopulmonary mechanics.	
ANES 1403: Anesthesia Equipment, Delivery Systems & Technology I	**4 Credits**
Principles of anesthesia machines, gas supply systems, vaporizers, ventilators, breathing circuits, safety features, and daily calibration inspection.	
HPRS 2401: Pharmacology for Anesthesia Technology	**4 Credits**
In-depth study of general/regional anesthetics, neuromuscular blockers, sedatives, analgesics, vasopressors, local anesthetics, and IV fluids.	
PSYC 2301: General Psychology & Therapeutic Communication	**3 Credits**
Human behavior, stress responses, pre-operative anxiety management, and interprofessional surgical team communication.	

SEMESTER 3: CLINICAL DIAGNOSTICS & OPERATING ROOM PRACTICUM I (15 CREDITS)	
ANES 2301: Airway Management & Instrumentation Lab	**3 Credits**
Hands-on training in supraglottic devices, endotracheal intubation assistance, fiberoptic scopes, video laryngoscopes, and emergency airway algorithms.	
ANES 2403: Hemodynamic Monitoring, Autotransfusion & Lab Diagnostics	**4 Credits**
Setup and calibration of arterial lines, CVP catheters, POCT blood gas analyzers (ABG), TEG machines, and cell-saver autotransfusion systems.	
SRGT 1301: Perioperative Surgical Procedures & Aseptic Technique	**3 Credits**
Surgical positioning, sterile field maintenance, autoclave sterilization, operating room safety standards (OSHA/AORN), and infection control.	
ANES 2560: Anesthesia Technology Clinical Practicum I (180 Hours)	**5 Credits**
Supervised clinical placement in general surgical operating rooms, assisting anesthesia providers during induction, maintenance, and emergence.	

SEMESTER 4: SPECIALTY ANESTHESIA, CRISIS MANAGEMENT & PRACTICUM II (15 CREDITS)	
ANES 2409: Specialty Anesthesia (Cardiac, Neuro, Pediatric, Trauma & OB)	**4 Credits**
Anesthesia tech support for cardiothoracic surgery, neurosurgery, pediatric anesthesia, obstetrics, and high-level trauma resuscitation.	
ANES 2311: Anesthesia Emergencies, Malignant Hyperthermia & Resuscitation	**3 Credits**
Crisis management protocols for Malignant Hyperthermia (MH), cardiac arrest (ACLS), anaphylaxis, massive transfusion, and airway crises.	
ANES 1213: ASATT Board Certification Review & Seminar	**2 Credits**
Targeted review of national exam domains (ASATT Cer.A.T.T.), practice board exams, resume building, and career transition.	
ANES 2661: Anesthesia Technology Clinical Practicum II (360 Hours)	**6 Credits**

Advanced 360-hour clinical practicum in specialty operating suites, cardiac rooms, trauma bays, and outpatient surgical centers under certified preceptors.

5. Tuition and Comprehensive Cost Structure

Transparent, credit-hour pricing model covering academic tuition, high-fidelity anesthesia simulation labs, specialized surgical consumables, and clinical placement infrastructure.

Direct Institutional Costs (Billed Across 2 Years / 60 Credits)

Expense Category	Cost (USD)	Description
Tuition ($450 / credit × 60 credits)	$27,000.00	Covers all 60 academic, biomedical, simulation lab, and clinical practicum credits.
Institutional & Technology Fee ($600 / yr)	$1,200.00	Includes student services, library databases, technology fees, and LMS infrastructure across 2 years.
Anesthesia Sim Lab & Consumables Fee	$1,450.00	Covers airway devices, arterial/CVP line kits, cell-saver supplies, fiberoptic equipment maintenance, and PPE.
Clinical EHR & Simulation Software Fee	$450.00	Access to simulated anesthesia record keeping systems (AIMS), virtual airway labs, and board practice platforms.
Total Direct Institutional Costs	**$30,100.00**	**Total billed directly by the University of Justice across the 2-year program.**

Estimated Indirect Expenses (Out-of-Pocket / Third-Party)

Note: These items are paid directly to external vendors across the 2-year duration.

Expense Item	Estimated 2-Yr Cost	Notes
Textbooks & Digital Reference Suites	$850.00	Required bundles (Anesthesia Technology, Pharmacology, Anatomy, Chemistry).
Operating Room Scrubs & Footwear	$300.00	Designated clinical scrubs, protective surgical eyewear, and fluid-resistant shoes.
Background Check & Drug Screenings	$160.00	Mandatory screening for clinical operating room site clearances across 2 years.
Immunizations & Health Clearance	$250.00 – $450.00	Dependent on personal health insurance coverage.
ASATT Cer.A.T.T. National Exam Fee	$325.00	ASATT National Board Certification Examination fee upon graduation.
Total Estimated Indirect Costs	**$1,885.00 – $2,085.00**	**Estimated out-of-pocket expenses across 2 years.**

GRAND TOTAL ESTIMATED 2-YEAR DEGREE INVESTMENT: $31,985.00 – $32,185.00

6. Financial Aid and Payment Options

To ensure accessibility, the University of Justice provides robust financial support options for Associate Degree candidates:

- **Federal Student Aid (FAFSA):** Eligible for Federal Pell Grants, Direct Subsidized Loans, and Direct Unsubsidized Loans.
- **Institutional Tuition Installment Plans:** Semester-based interest-free payment plans allowing tuition to be divided across monthly payments.
- **Veterans' Educational Benefits:** Fully approved for GI Bill®, Post-9/11 GI Bill, and Yellow Ribbon Program benefits.
- **Hospital Sponsorship & Workforce Grants:** Qualifying candidates may secure tuition sponsorship through partner health systems with clinical service commitments.

7. Professional Certification & Career Pathway

Graduates of the A.S. in Anesthesia Technology program are eligible for elite national credentials and advanced career opportunities:

- **Cer.A.T.T. (ASATT):** Certified Anesthesia Technologist through the American Society of Anesthesia Technologists and Technicians.
- **AHA ACLS & BLS:** Advanced Cardiovascular Life Support & Basic Life Support certifications through the American Heart Association.
- **Career Opportunities:** Employment in Level I Trauma Centers, University Teaching Hospitals, Ambulatory Surgical Centers, Cardiac Surgery Suites, and Labor & Delivery Units.
- **Academic Articulation:** Seamless transfer pathway toward Bachelor of Science in Healthcare Administration (BSHA) or Pre-CRNA/Health Science degrees.