Anesthesia Technology Program++

Associate in Applied Science

Minimum of 64-66 credit hours

Oklahoma City Community College offers the first and only anesthesia technology program in Oklahoma. As an integral member of the anesthesia care team, certified anesthesia technologists focus on fundamental and advanced clinical procedures that assist licensed anesthesia providers in the safe and efficient care of patients receiving anesthesia. Anesthesia technologists are trained to anticipate the needs of the patient and the provider, as determined by the surgical requirements, procedure or circumstance. Upon successful completion of the associate degree in anesthesia technology, the graduate will be eligible to sit for the American Society of Anesthesia Technologists and Technicians (ASATT) national certification examination. Certified anesthesia technologists may work in a variety of clinical settings including hospital operating rooms, interventional and diagnostic radiology, labor and delivery suites, intensive care units, emergency rooms, outpatient procedure suites, and ambulatory surgery centers. Courses identified by "C" within a program curriculum pattern must be completed with a grade of “C” or better by students majoring in this program.

Course Sequence

Course ID	Course Name	Credits	Type	Min Gd
Term 1				
SCL 1001	Success in College and Life	1	Life Skills	C
ENGL 1113	English Composition I	3	Gen Ed	C
BIO 1314	Human Anatomy and Physiology I	OR	Support	C
BIO 2255	Human Anatomy	4-5	Support	C
Term 2				
ENGL 1213	English Composition II	3	Gen Ed	C
BIO 1414	Human Anatomy and Physiology II	OR	Support	C
BIO 2234	Human Physiology	4	Support	C
Term 3				
AHP 1013	Medical Terminology	3	Gen Ed	C
GEN ED MATH	Gen Ed Math	3^	Gen Ed	C
Term 4				
CHEM 1123	Survey of General, Organic, and Biochemistry	AND	Gen Ed	C
CHEM 1131	Laboratory for Survey of General, Organic, and Biochemistry	OR	Gen Ed	C
CHEM 1115	General Chemistry I	4-5	Gen Ed	C
GEN ED	Gen Ed Elective	3^	Gen Ed	C
Term 5				
ANES 1112	Introduction to Anesthesia Technology	2	Major	C
ANES 1124	Fundamentals I	4	Major	C
Term 6				
ANES 1134	Instrumentation I	4*	Major	C
ANES 1143	Pharmacology	3*	Major	C
ANES 1155	Fundamentals II	5*	Major	C
Term 7				
ANES 1134	Instrumentation I	*	Major	C
ANES 1143	Pharmacology	*	Major	C
ANES 1155	Fundamentals II	*	Major	C
POLSC 1113	American Federal Government	3	Gen Ed	
Term 8				
ANES 2114	Instrumentation II	4*	Major	C
ANES 2125	Fundamentals III	5*	Major	C
ANES 2133	Professional Aspects of Anesthesia Technology	3*	Major	C
Term 9				
ANES 2114	Instrumentation II	*	Major	C
ANES 2125	Fundamentals III	*	Major	C
ANES 2133	Professional Aspects of Anesthesia Technology	*	Major	C
HIST 1483	U.S. History to 1877	OR	Gen Ed	
HIST 1493	U.S. History 1877 to Present	3	Gen Ed	
***16-week course offered during two 8-week terms**				

Course Grouping

Major Courses: (30 credit hours) Anesthesia Technology: (C)ANES 1112; (C)ANES 1124; (C)ANES 1134; (C)ANES 1143; (C)ANES 1155; (C)ANES 2114; (C)ANES 2125; (C)ANES 2133 (All Anesthesia major courses have pre and co-requisite courses which are listed with the course descriptions in this catalog. These courses also have clinical components that require pre-placement drug testing, purchase of liability insurance, immunizations and health records, a clinical uniform, extensive background checks and transportation to clinical sites).

General Education Courses: (25-26 credit hours) Allied Health: (C)AHP 1013; Chemistry: (C)CHEM 1123, and (C)CHEM 1131, or (C)CHEM 1115; English: (C)ENGL 1113; (C)ENGL 1213; History: HIST 1483 or HIST 1493; ^Gen Ed: (C)3 hours of Gen Ed Elective; ^Math: (C)MATH 1483 or (C)#higher Gen Ed Math; Political Science: POLSC 1113

Support Courses: (8-9 credit hours): Biological Science: (C)BIO 1314 or +(C)BIO 2255; (C)BIO 1414 or +(C)BIO 2234

Life Skills Courses: (1 credit hour) Life Skills: (C)SCL 1001

A grade of "C" must be achieved in all courses required for this degree with the exception of POLSC 1113 and HIST 1483 or HIST 1493 (a grade of "D" is minimum for these courses).
+BIO 2255 requires prerequisite of BIO 1124; BIO 2234 requires prerequisite of BIO 1124 and one college-level chemistry course
#Gen Ed Math:
MATH 1483 Functions and Modeling, MATH 1503 Contemporary Math, MATH 1533 Pre-Calculus and Analytic Geometry, MATH 2013 Introduction to Statistics, PSY 2123 Behavioral Statistics, OR any course with a MATH prefix having MATH 1483 or MATH 1533 as a prerequisite
^Pending OSRHE approval

Program Notes

Notes: This Technical and Occupational program is designed to prepare students to enter the job force following completion. See Technical and Occupational Programs in the general information section of the catalog.
++Special Admissions Procedures:
All Health Professions students are required to submit a nationwide background check and pre-placement drug testing prior to clinical/fieldwork. More information will be distributed upon acceptance into your respected program.

Degree Program Course Descriptions

AHP 1013 - Medical Terminology
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits After studying the root words, prefixes, and suffixes from which medical terms evolve, the student will correctly spell medical terms, define terms commonly used in medical fields, and determine the meaning of unfamiliar medical terms.

ANES 1112 - Introduction to Anesthesia Technology
Prerequisites: Co-requisite: ANES 1124
2 Credits This course is an introduction to the role of the Anesthesia Technologist and their relationship to other Healthcare Professionals. In addition, the student will be introduced to the theory and concepts of functioning in a surgical environment including a fundamental understanding of a variety of anesthesia equipment/supplies and basic case set-up. This course satisfies the computer proficiency requirement.

ANES 1124 - Fundamentals I
Prerequisites: Co-requisite: ANES 1112
4 Credits This course introduces the student to management of patients undergoing general, regional, or sedation anesthesia. The dependence of medical diagnostics and the analogous relationship of the human body to the sciences are emphasized. Didactic and laboratory instruction as well as clinical preceptorships are provided to prepare the student with cognitive, psychomotor, and affective learning related to anesthesia technology fundamentals. This course satisfies the computer proficiency requirement.

ANES 1134 - Instrumentation I
Prerequisites: ANES 1124; Co-requisites: ANES 1143; ANES 1155
4 Credits This course focuses on the equipment and instrumentation utilized in providing anesthesia. Topics to be covered include the anesthesia machine, airway equipment and basic set-up. In addition, ancillary equipment including but not limited to gas cylinders, hospital gas supply lines, ventilators, absorbers, and pulse oximetry will be covered. Set-up, calibration, operation, basic troubleshooting, maintenance, and safety checks will be examined. Didactic and laboratory instruction are provided to prepare the student with cognitive, psychomotor, and affective learning related to anesthesia technology basic instrumentation. This course satisfies the computer proficiency requirement.

ANES 1143 - Pharmacology
Prerequisites: ANES 1124; Co-requisites: ANES 1134; ANES 1155
3 Credits This course focuses on the pharmacokinetics and pharmacodynamics of drugs used in the administration of anesthesia and analgesia. Topics covered include dosage calculation, physics gas laws, routes of administration, drug interactions, and the various classes of anesthetic agents. Safe practices of delivery and storage of medication as well as assisting anesthesia care providers in the preparation of medications will be introduced. This course satisfies the computer proficiency requirement.

ANES 1155 - Fundamentals II
Prerequisites: ANES 1124; Co-requisites: ANES 1134; ANES 1143
5 Credits This course provides didactic, laboratory, and clinical instruction to prepare the student with the cognitive, psychomotor, and affective learning skills related to anesthesia technology fundamentals. Topics include: human pathophysiology, surgical procedures, positioning, special equipment needs, and anesthesia technology care plan development. Additional topics include an introduction to anesthesia emergencies, e.g., difficult airway algorithms, malignant hyperthermia, fire in the operating room, cardiac arrest, anaphylaxis, and local anesthesia toxicity. Clinical settings will include adult and pediatric hospital operating rooms, interventional and diagnostic radiology, outpatient procedure suites, labor and delivery suites, and ambulatory surgery centers. All clinical experiences will be under direct supervision with a clinical preceptor. By the end of the semester, students will independently set-up equipment, anticipate the anesthesia provider's needs during routine and emergency procedures, and recognize the patient's response to medications and treatments administered by the anesthesia provider. This course satisfies the computer proficiency requirement.

ANES 2114 - Instrumentation II
Prerequisites: Prerequisites: ANES 1134; Co-requisites: ANES 2125, ANES 2133
4 Credits This course provides instruction and lab application to the theories and concepts of advanced anesthesia equipment used in complex anesthesia situations. Topics include Point of Care Technology, Invasive monitoring and transducers, thromboelastograph, cell saver, rapid volume infuser, IABP's transport monitoring, NMB assessment, VADs, defibrillators, pacemakers and implantable defibrillators. This course satisfies the computer proficiency requirement.

ANES 2125 - Fundamentals III
Prerequisites: ANES 1155; Co-requisites: ANES 2114; ANES 2133
5 Credits This course provides didactic, laboratory and clinical instruction to prepare the student with the cognitive, psychomotor, and affective learning skills related to anesthesia technology advanced fundamentals. Topics include ACLS certification, IV therapy, pediatric, obstetric and emergency anesthesia. This course satisfies the computer proficiency requirement.

ANES 2133 - Professional Aspects of Anesthesia Technology
Prerequisites: ANES 1155; Co-requisites: ANES 2114; ANES 2125
3 Credits This course serves as a capstone course for the anesthesia technology program. Topics include supply chain fundamentals, including budget limitations and cost effectiveness; ethics and law related to anesthesia technology, policies and standards for quality assurance, process improvement, regulatory associations, and credentialing. Students will prepare for the national technologist credentialing exam, review career opportunities and discuss present and future technologies. This course satisfies the computer proficiency requirement.

BIO 1314 - Human Anatomy and Physiology I
Prerequisites: ENGL 0203 or adequate placement score or by meeting determined placement measures; MATH 0103 or adequate math placement. An adequate biology placement test score or BIO 0123 or a college-level biological science class.
4 Credits Through a systematic study of the structure and function of the human body, its cells, tissues, organs and systems, the student will identify and describe basic anatomical structures and fundamental physiological processes that occur in health and disease for the major body systems. Laboratory work which requires dissection is an integral and required part of the course.

BIO 1414 - Human Anatomy and Physiology II
Prerequisites: BIO 1314 with a grade of "C" or higher
4 Credits With Human Anatomy & Physiology I as a foundation, the student will advance his or her study of the structure and function of the human body and will identify and describe more detailed anatomical structures and more comprehensive physiological processes that occur in health through a systematic survey of the major body systems. Laboratory work which requires dissection is an integral and required part of the course.

BIO 2234 - Human Physiology

Prerequisites: BIO 1124 and one college-level chemistry course.
4 Credits Students discuss major systems of the human body, contrast functional and regulatory activities of each and identify factors influencing homeostasis. Through the use of models, the student will recognize the relative influences and interrelationships between circulation, digestion, metabolism, respiration, kidney function, muscle action, endocrine and nervous control, and reproduction of other systems and the organism as a whole. Laboratory work which requires dissection is an integral and required part of the course.

BIO 2255 - Human Anatomy
Prerequisites: BIO 1124
5 Credits Students study the development and gross morphology of the human body and its systems. This course may not be applied for Biology major credit. Open only to majors in physical education, science education, physical therapy, nursing, occupational therapy, physician's associate, dental hygiene, pharmacy, and selected fields. Laboratory dissection of human cadavers is required.

CHEM 1115 - General Chemistry I
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures; MATH 1483 or MATH 1533, or both MATH 0313 and High School Chemistry or CHEM 1123.
5 Credits This course is designed for science and engineering majors. The course covers nomenclature, atomic and molecular structure, stoichiometry, acid/base and other aqueous reactions, states of matter, phase changes, gas laws, and an introduction to thermochemistry. Laboratory experience is an integral part of the course.

CHEM 1123 - Survey of General, Organic, and Biochemistry
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures; MATH 0313 or adequate math placement.
3 Credits This course is designed for nursing and allied health programs which do not require General Chemistry I for science majors. This course is also appropriate for individuals interested in a general overview of chemistry. The course covers selected topics in general chemistry including unit conversions, atomic structure, chemical bonding, acids, bases, pH, chemical equilibrium, electrolytes, and properties of solutions. The course also introduces topics from organic and biochemistry. The relationship between chemical principles and human health is emphasized throughout the course.

CHEM 1131 - Laboratory for Survey of General, Organic, and Biochemistry
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures; MATH 0313 or adequate math placement. Prerequisite or Corequisite: CHEM 1123
1 Credit Students apply chemical principles discussed in CHEM 1123 in a laboratory setting.

ENGL 1113 - English Composition I
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits The student will write well-developed compositions which demonstrate the principles of unity, coherence, and organization and which contain specific details and vivid language. The students will locate library material and incorporate researched materials into compositions.

ENGL 1213 - English Composition II
Prerequisites: ENGL 1103 or ENGL 1113 taken within the last year, with strong encouragement for immediate continuation.
3 Credits In this advanced writing course, students will create essays that explore and evaluate a variety of issues and perspectives suggested by fiction, poetry, drama, essays, and other types of cultural texts. Students will refine and augment the writing techniques they learned in ENGL 1113 or ENGL 1103 to develop well- reasoned, well-structured arguments in a clear, fluid, and engaging prose style.

GEN ED - Gen Ed Elective
3 Credits General Education elective

GEN ED MATH - Gen Ed Math
3 Credits MATH 1483 Functions and Modeling, MATH 1503 Contemporary Math, MATH 1533 Pre-Calculus and Analytic Geometry, MATH 2013 Introduction to Statistics, PSY 2123 Behavioral Statistics, OR any course with a MATH prefix having MATH 1483 or MATH 1533 as a prerequisite

HIST 1483 - U.S. History to 1877
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits After analyzing events in American history from 1400 to 1877 in such areas as revolution, geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student's search for change, precedents, and conflict in the American past. A general education requirement.

HIST 1493 - U.S. History 1877 to Present
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits After analyzing events in American history from 1877 to the present in such areas as geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student's search for change, precedents, and conflict in the American past. A general education requirement.

POLSC 1113 - American Federal Government
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits A study of the principles, structure, processes and functions of the United States federal government.

SCL 1001 - Success in College and Life
Prerequisites: ENGL 0106 or adequate reading/writing assessment scores
1 Credit Students will learn best practices for academic, career, and personal success. Students will discover their individual strengths, interests, and values to create a personalized plan; select and utilize resources that are applicable to their growth and success; and engage as active and responsible members of the academic community. This course should be taken during a student's first semester of college work at Oklahoma City Community College and is a required course in degree plans to satisfy the Life Skills requirement.