

SURGICAL TECHNOLOGY – ASSOCIATE OF APPLIED SCIENCE DEGREE PROGRAM

Offered at AUS, HNL and SA Only

Program Description: The program is designed to prepare students for entry-level employment as a competent Surgical Technologist: Level I, in the cognitive, psychomotor, and affective learning domains, via classroom and clinical hands-on training, as well as professional development. Graduates will demonstrate skills in Cardiopulmonary Resuscitation, Surgical Techniques, Surgical Procedures, disinfecting and decontamination, sterilization, gowning and gloving, instrument categories and usage, specialty equipment usage, homeostasis, instrument counts, skin preparation and patient positioning, surgery preparation, and assisting of surgeons. Students will utilize these work place skills in clinics that perform surgery, out-patient surgery centers and hospital operating theaters.

The Surgical Technology Program provides education for entry-level competency into the profession of surgical technology. At the time of completion, a student will have 896 hours in an operating room setting with a minimum of 120 cases of experience. The surgical technology student will demonstrate the following:

- 1) Knowledge and practice of basic patient-care concepts.
- 2) Application of the principles of asepsis in a knowledgeable manner that provides for optimal patient care in the operating room.
- 3) Basic surgical case preparation skills.
- 4) Ability to perform in the role of first scrub, second scrub, and non-sterile surgical technologist
- 5) Responsible behavior as a health care professional.

Program Requirements: Each participant must possess a high school diploma or GED and be able to read and write English. Participants must have good coordination and health, be emotionally stable, neat, professional, and must pass the Scholastic Level Exam with a minimum score of 19. The college uses an applicant ranking system to select the most qualified candidates for program openings.

Program Length: The length of time normally required to complete the program is eighty (80) weeks.

Delivery Method: Blended Program, delivered by both residential and distance education. Courses with an asterisk (*) are delivered via distance education.

		LECTURE HOURS	LAB HOURS	CLINICAL HOURS	TOTAL HOURS	SEMESTER CREDITS
Module I						
APST 101A	Anatomy & Physiology A	48	0	0	48	3.0
STA 101	Law, Ethics, and Professionalism	32	0	0	32	2.0
STA 103	Microbiology	48	0	0	48	3.0
<i>CRT 100</i>	<i>Critical Thinking*</i>	48	0	0	48	3.0
Total Module I		176	0	0	176	11.0
Module II						
STA 100	Introduction to Surgical Technology	80	0	0	80	5.0
<i>ENGL 101</i>	<i>English Composition*</i>	48	0	0	48	3.0
STA 102	Technological Sciences	24	0	0	24	1.5
<i>PSYT 102</i>	<i>Introduction to Psychology*</i>	48	0	0	48	3.0
Total Module II		200	0	0	200	12.5
Module III						
STA 104	Pharmacology	64	0	0	64	4.0
MTST 101A	Medical Terminology A	8	0	0	8	.5
<i>POFM 102</i>	<i>College Mathematics*</i>	48	0	0	48	3.0
Total Module III		120	0	0	120	7.5
Module IV						
STA 200	Fundamentals of Aseptic Technique	80	96	0	176	8.5**
Total Module IV		80	96	0	176	8.5**
Module V						
STA 201	Surgical Procedures I	96	80	0	176	9.0
APST 101B	Anatomy & Physiology B	48	0	0	48	3.0
MTST 101B	Medical Terminology B	32	0	0	32	2.0
Total Module V		176	80	0	256	14.0

Module VI						
STA 202	Surgical Procedures II	96	0	0	96	6.0
APST 101C	Anatomy & Physiology C	48	0	0	48	3.0
MTST 101C	Medical Terminology C	32	0	0	32	2.0
Total Module VI		176	0	0	176	11.0
Module VII						
STAC 301	Clinical I	0	0	192	192	4.0
STR 101A	Professional Readiness A	32	0	0	32	2.0
Total Module VII		32	0	192	224	6.0
Module VIII						
STAC 302	Clinical II	0	0	192	192	4.0
STR 101B	Professional Readiness B	32	0	0	32	2.0
Total Module VIII		32	0	192	224	6.0
Module IX						
STAC 303	Clinical III	0	0	256	256	5.5
STR 101C	Professional Readiness C	32	0	0	32	2.0
Total Module IX		32	0	256	288	7.5
Module X						
STAC 304	Clinical IV	0	0	256	256	5.5
STR 101D	Professional Readiness D	32	0	0	32	2.0
Total Module X		32	0	256	288	7.5
Program Totals		1056	176	896	2128	91.5**

*Courses delivered via distance education

** NOTE: Based on the Texas Workforce Commission – Career Schools and Colleges (TWC) semester credit calculation formula, the semester credits value for STA 200 is 8.0 Semester Credits. The total semester credits for the program for TWC purposes is 91.0.

Total Hours = 2128/Total Semester Credits = 91.5

Note: Students are required to successfully pass all courses with a minimum GPA of 2.0 within the maximum allowable time frame. Upon successful completion of all course work, externship, and payment of all monies due, the student is awarded an Associate of Applied Science Degree (AAS)

Course Descriptions

Course descriptions include the course number, title, and synopsis, a listing of lecture, laboratory, externship hours, total clock hours and academic credits. For example, the listing “15/30/0/45/2.0” indicates that the course consists of 15 hours of lecture, 30 hours of laboratory, 0 externship hours, 45 total clock hours and 2.0 academic credit.

Note: Students must successfully complete all prerequisite courses Modules I-IX before advancing into Module X. Modules IV-X must be taken in sequence.

APST 101A	ANATOMY & PHYSIOLOGY A	48/0/0/48/3.0
Students will identify the following: Introduction to the Structural Units, Chemistry of Living Things, Cells, Tissues, Membranes, and Nutrition. Students will identify the following systems of the human body to include identifying the organs of each, describing their function, and defining disorders: Integumentary and Blood. Students will discuss Infection Control and Standard Precautions and learn about Genetics and genetically linked Diseases. Prerequisite: None		
STA 101	LAW, ETHICS, AND PROFESSIONALISM	32/0/0/32/2.0
Students will learn the ethical and legal aspects of surgical technology as it relates to the patient and surgical team. Students will learn patient confidentiality, medical liability, and negligence. Students will learn the types of communication and the importance of communication with regards to patients, co-workers, and potential employers. Students will construct a professionally effective resume and will learn interviewing styles. Prerequisite: None		
STA 103	MICROBIOLOGY	48/0/0/48/3.0
Students will learn to identify disease-producing microorganisms and how to prevent the spread of disease. Students will learn Cells and Cell Structures, Genetics and Classification of Organisms, Microbial Life and Growth, Infectious Disease Process, Control of Microbial Growth and Aseptic Technique, Human-Microbe Relationships, and Immunology. Students will study Bacteriology, Virology, Parasitology, and Wound Healing. Prerequisite: None		

CRT 100	CRITICAL THINKING	48/0/0/48/3.0
This course introduces critical thinking skills. Students gain an introductory level experience in deductive/inductive reasoning skills. The student will discuss experiences of everyday life and the repercussions of decision-making at various levels. Prerequisite: None		
STA 100	INTRODUCTION TO SURGICAL TECHNOLOGY	80/0/0/80/5.0
Students will explain the history and development of the field of surgical technology, surgical team members and their roles, administrative personnel in the operating room, surgical conscience and aseptic techniques. Students will learn surgical technology theory and patient care concepts. Students will learn the applications of patient safety, patient transport, and patient positioning. Students will learn the decontamination/sterilization process and will study Maslow's hierarchy of human needs, cultural competence, and special patient populations. Prerequisite: None		
ENGL 101	ENGLISH COMPOSITION	48/0/0/48/3.0
This course provides the student with instruction and practice in expository writing and emphasizes grammatical and mechanical accuracy and proper essay form. Emphasis is placed on clarity, logical organization, unity and coherence of central idea and supporting material. Prerequisite: None		
STA102	TECHNOLOGICAL SCIENCES	24/0/0/24/1.5
Students will learn basic computer and surgical applications and will learn basic terms and principles of electricity, physics, and robotics as they relate to safe patient care practices in the surgical environment. Prerequisite: None		
PSYT 102	INTRODUCTION TO PSYCHOLOGY	48/0/0/48/3.0
This course covers the interrelationship between biology and human behavior. Included in the course are theories involved in sensation and perception, consciousness, learning, memory, thought, language, mental abilities, motivation and emotion, effects of stress, personality traits, social psychology, and psychological disorders and their treatments. Prerequisite: None		
STA 104	PHARMACOLOGY	64/0/0/64/4.0
Students will learn basic pharmacology, medication development, regulation, resources, pharmacology math and medication administration. Students will learn the generic and brand names, their categories, purpose, action, administration routes, and proper handling in order to provide safe patient care. Students will learn: Antibiotics, Diagnostic Agents, Diuretics, Hormones, Medications that affect Coagulation, Ophthalmic Agents, Fluids and Irrigation Solutions, and Antineoplastic Chemotherapy Agents. Students will also learn names and classifications of anesthetic and supplemental agents, as well as their purpose. Students will learn: Preoperative Medications, Patient Monitoring and Local and Regional Anesthesia, General Anesthesia, and Emergency Situations. Prerequisite: None		
MTST 101A	MEDICAL TERMINOLOGY A	8/0/0/8/0.5
Students will learn to interpret the language of medicine by combining prefixes, suffixes, and root words into medical terms. Students will learn the study of basic structures of medical words including prefixes, suffixes, roots, combining forms, plurals, pronunciation, spelling and the definitions of medical terms. Students will learn the body planes, body directions, and body cavities along with structures of the body such as cells, tissues, genetics, and glands. Students will learn types of diseases and associated transmission and outbreak. Students will also learn about congenital disorders. Emphasis is on building a professional vocabulary required for employment within the allied health care field. Prerequisite: None		
POFM 102	COLLEGE MATHEMATICS	48/0/0/48/3.0
This course covers basic mathematics including addition, subtraction, multiplication, and division. Also covered is fraction notation and mixed numerals, decimals, ratios, rates and unit prices, proportions, solving various problems using percent equations and proportions, sales tax, commissions, and discounts, interest, data, graphs, and statistics, measurements, geometry, real numbers, algebra, and equations. Prerequisite: None		
STA 200	FUNDAMENTALS OF ASEPTIC TECHNIQUE	80/96/0/176/8.5 (ABHES) 80/96/0/176/8.0 (TWC)
Students will learn in-depth coverage of aseptic technique principles and practices, case planning and intraoperative routines, surgical instruments, surgical skin prepping and draping, infectious process, wound healing, diagnostic and assessment procedures, disaster preparedness and response, and creation and maintenance of the sterile field. Students will learn traffic patterns within the surgical suite, surgical suite preparations, proper aseptic technique, surgical hand scrub, sterilization principles, surgical conscience, assembling and packaging, proper wrapping techniques, and proper body mechanics. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A.		

STA 201	SURGICAL PROCEDURES I	96/80/0/176/9.0
<p>Student will learn the introduction to surgical pathology and its relationship to surgical procedures; Emphasis on surgical procedures related to General Surgery, Gynecological and Obstetrical, Genitourinary, Ophthalmic, Ear, Nose, Pharynx, Larynx, Oral and Maxillofacial, Plastic/Reconstructive, and Emergency Trauma Surgery Students will learn the instruments, equipment and supplies required for safe patient care. Students will learn how to function in the role of a scrubbed surgical technologist. Students will learn how to properly prepare the surgical suite. Students will learn how to set up a back table and mayo-stand and will learn how to properly handle medications, catheters, drains, suture, blades and specimens. Students will learn how to properly perform transition followed by performing a “mock” surgery. Students will learn to perform in the circulator role to include proper transporting and positioning of the surgical patient and proper surgical prepping techniques. Students will learn how to take patient’s vital signs and will perform an insertion of a foley catheter. Students will learn how to properly perform post procedural actions. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200.</p>		
APST 101B	ANATOMY & PHYSIOLOGY B	48/0/0/48/3.0
<p>Students will identify the following systems of the human body: Special Senses, Endocrine, Circulation and Blood Vessels, Lymphatic and Immunity, Digestive, Urinary/Excretory, Reproductive. Prerequisite: APST 101A, STA 101, STA 103, STA 100, ST</p>		
MTST 101B	MEDICAL TERMINOLOGY B	32/0/0/32/2.0
<p>Students will learn to interpret the language of medicine by combining prefixes, suffixes, and root words into medical terms. Students will learn the study of basic structures of medical words including prefixes, suffixes, roots, combining forms, plurals, pronunciation, spelling and the definitions of medical terms for the following systems: Lymphatic and Immune, Digestive, Urinary, Eyes and Ears, Endocrine, and Reproductive. Students will learn the vocabulary related to Diagnostic Procedures, Nuclear Medicine, and Pharmacology. Emphasis is on building a professional vocabulary required for employment within the allied health care field. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200.</p>		
STA 202	SURGICAL PROCEDURES II	96/0/0/96/6.0
<p>Students will learn the introduction to surgical pathology and its relationship to surgical procedures; Emphasis on surgical procedures related to Minimally Invasive Endoscopic and Robotic-Assisted, Orthopedic, Peripheral Vascular, Thoracic and Pulmonary, Cardiac, Pediatric, and Neurosurgery. Students will learn the instruments, equipment, and supplies required for safe patient care. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B.</p>		
APST 101C	ANATOMY & PHYSIOLOGY C	48/0/0/48/3.0
<p>Students will identify the following systems of the human body: Skeletal, Muscular, Central Nervous System, Peripheral and Autonomic System, Heart, and Respiratory System. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B.</p>		
MTST 101C	MEDICAL TERMINOLOGY C	32/0/0/32/2.0
<p>Students will learn to interpret the language of medicine by combining prefixes, suffixes, and root words into medical terms. Students will learn the study of the basic structure of medical words including prefixes, suffixes, roots, combining forms, plurals, pronunciation, spelling and definitions of medical terms for the following body systems: Skeletal, Muscular, Cardiovascular, Respiratory, Nervous, and Skin (Integumentary). Emphasis is on building a professional vocabulary required for employment within the allied health care field. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B.</p>		
STAC 301	CLINICAL I	0/0/192/192/4.0
<p>This course will provide actual hands on learning within an operating room and the central sterile processing department. Students will demonstrate correct case set-up, anticipation of surgeon’s needs, draping, counts, knowledge of medications, and dressing supplies. Students will play an active role in the operative procedure. Students will demonstrate knowledge of instrumentation and the decontamination and sterilization process. Students will spend time in the role of non-sterile surgical technologist. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B, STA 202, APST 101C, MTST 101C. Co-requisite: STR 101A.</p>		
STR 101A	PROFESSIONAL READINESS A	32/0/0/32/2.0
<p>This course is designed to provide the student a tool to evaluate their knowledge of the program’s subject matter. Students are tested on a variety of subjects related to Anatomy & Physiology, Medical Terminology, Introduction to Surgical Technology, Fundamentals of Aseptic Technique, Professional Development, Pharmacology, Microbiology, Surgical Procedures and Technological Sciences. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B, STA 202, APST 101C, MTST 101C. Co-requisite: STAC 301.</p>		
STAC 302	CLINICAL II	0/0/192/192/4.0

<p>This course will provide actual hands on learning within an operating room and the central sterile processing department. Students will demonstrate correct case set-up, anticipation of surgeon's needs, draping, counts, knowledge of medications, and dressing supplies. Students will play an active role in the operative procedure. Students will demonstrate knowledge of instrumentation and the decontamination and sterilization process. Students will spend time in the role of non-sterile surgical technologist. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B, STA 202, APST 101C, MTST 101C, STAC 301, STR 101A. Co-requisite: STR 101B.</p>		
STR 101B	PROFESSIONAL READINESS B	<i>32/0/0/32/2.0</i>
<p>This course is designed to provide the student a tool to evaluate their knowledge of the program's subject matter. Students are tested on a variety of subjects related to Anatomy & Physiology, Medical Terminology, Introduction to Surgical Technology, Fundamentals of Aseptic Technique, Professional Development, Pharmacology, Microbiology, Surgical Procedures and Technological Sciences. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B, STA 202, APST 101C, MTST 101C, STAC 301, STR 101A. Co-requisites: STAC 302.</p>		
STAC 303	CLINICAL III	<i>0/0/256/256/5.5</i>
<p>This course will provide actual hands on learning within an operating room and the central sterile processing department. Students will demonstrate correct case set-up, anticipation of surgeon's needs, draping, counts, knowledge of medications, and dressing supplies. Students will play an active role in the operative procedure. Students will demonstrate knowledge of instrumentation and the decontamination and sterilization process. Students will spend time in the role of non-sterile surgical technologist. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B, STA 202, APST 101C, MTST 101C, STAC 301, STR 101A, STAC 302, STR 101B. Co-requisites: STR 101C.</p>		
STR 101C	PROFESSIONAL READINESS C	<i>32/0/0/32/2.0</i>
<p>This course is designed to provide the student a tool to evaluate their knowledge of the program's subject matter. Students are tested on a variety of subjects related to Anatomy & Physiology, Medical Terminology, Introduction to Surgical Technology, Fundamentals of Aseptic Technique, Professional Development, Pharmacology, Microbiology, Surgical Procedures and Technological Sciences. Prerequisite: APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B, STA 202, APST 101C, MTST 101C, STAC 301, STR 101A, STAC 302, STR 101B. Co-requisites: STAC 303.</p>		
STAC 304	CLINICAL IV	<i>0/0/256/256/5.5</i>
<p>This course will provide actual hands on learning within an operating room and the central sterile processing department. Students will demonstrate correct case set-up, anticipation of surgeon's needs, draping, counts, knowledge of medications, and dressing supplies. Students will play an active role in the operative procedure. Students will demonstrate knowledge of instrumentation and the decontamination and sterilization process. Students will spend time in the role of non-sterile surgical technologist. Prerequisite: CRT 100, ENGL 101, PSYT 102, POFM 102, APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B, STA 202, APST 101C, MTST 101C, STAC 301, STR 101A, STAC 302, STR 101B, STAC 303, STR 101C. Co-requisites: STR 101D.</p>		
STR 101D	PROFESSIONAL READINESS D	<i>32/0/0/32/2.0</i>
<p>This course is designed to provide the student a tool to evaluate their knowledge of the program's subject matter. Students are tested on a variety of subjects related to Anatomy & Physiology, Medical Terminology, Introduction to Surgical Technology, Fundamentals of Aseptic Technique, Professional Development, Pharmacology, Microbiology, Surgical Procedures and Technological Sciences. Prerequisite: CRT 100, ENGL 101, PSYT 102, POFM 102, APST 101A, STA 101, STA 103, STA 100, STA 102, STA 104, MTST 101A, STA 200, STA 201, APST 101B, MTST 101B, STA 202, APST 101C, MTST 101C, STAC 301, STR 101A, STAC 302, STR 101B, STAC 303, STR 101C. Co-requisites: STAC 304.</p>		