

SURGICAL TECHNOLOGY (ST)

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1520 clock hours/ 61 weeks (Total time to complete the program may vary based on school holidays and breaks)

46 weeks Theory/Lab (20 hours per week) + 15 weeks externship (maximum of 40 hours per week)

Program Objective:

The Surgical Technology program is a 1520-hour Diploma comprehensive course of study that combines theory and clinical practice. The curriculum is designed to provide qualified individuals an opportunity to acquire the knowledge, attitudes and skills that will enable them to become safe and competent practitioners of Surgical Technology.

The program prepares students for entry-level positions in a number of health care facilities including hospitals, medical centers, and public and private surgical centers. The program includes a mandatory 580-hour Surgical Technology Externship that must be completed prior to graduation.

It is not currently mandatory that graduates take certification examination upon successful program completion. However, many employers prefer or require that ST graduates be certified by the National Board of Surgical Technology and Surgical Assisting (NBSTSA). At the successful completion of the program, the graduate will be eligible to take the Certified Surgical Technology (CST) Examination given by the National Board of Surgical Technology and Surgical Assisting (NBSTSA). The College's Surgical Technology curriculum incorporates the CST Examination topics and is designed to prepare students to pass the examination.

The ST Program is delivered on campus/residential.

Upon successful completion of the program, graduates may obtain employment as:

- Surgical Technologist (CIP # 51.0909; O-NET # 29-2055.00)

Module #	Module Title	Week #	Clock Hours
I	Anatomy and Physiology	1-9	180
II	Basic Science	10-18	180
III	Surgical Technology	19-27	180
IV	Surgical Procedures	28-36	180
V	Mock Surgery	37-45	180
VI	Externship	45-61	620
Total:			1520

Note: one clock hour is defined as a 60-minute span of time in which 50 minutes is devoted to actual class instruction, with the remaining portion designated as a break.

For information on graduation rates, median debt of graduates, completing this program or other important information, visit: <http://www.cbd.edu/surgical-technology/>

Program Syllabus:

Course Number	Course Title	Lecture	Lab	Externship	Total Hours
ST101	Anatomy & Physiology I	85	5	0	90
ST102	Anatomy & Physiology II	85	5	0	90
ST201	Medical Terminology	35	5	0	40
ST202	Microbiology	25	5	0	30
ST203	Medical Law and Ethics	20	0	0	20
ST204	Pharmacology and Anesthesia	20	25	0	45
ST205	Patient Psychology	15	0	0	15
ST206	The Physical Environment and Safety	20	10	0	30
ST301	Introduction to Surgical Technology	5	20	0	25
ST302	Biomedical Science	10	0	0	10
ST303	Asepsis, Sterilization and Disinfection	10	20	0	30
ST304	Surgical Instrumentation	20	30	0	50
ST305	Sutures & Wound Healing	25	10	0	35
ST306	Case Management	5	25	0	30
ST401	Diagnostic Procedures, Asst. Circulator Duties	30	10	0	40
ST402	General, OBGYN & Urological Procedures	30	0	0	30
ST403	Ophthalmology, ENT, Oral Maxillofacial	30	0	0	30
ST404	Plastic and Reconstructive	15	5	0	20
ST405	Vascular and Cardiothoracic Procedures	30	0	0	30
ST406	Orthopedic and Neurology	30	0	0	30
ST501	Mock Surgery I	5	45	0	50
ST502	Mock Surgery II	5	45	0	50
ST503	Mock Surgery III	5	45	0	50
ST001	CPR	5	0	0	5
ST002	Career Development	5	5	0	10
ST504	Mock Clearance	0	15	0	15
ST601	Externship	35	0	580	615
ST003	CST Exam Administration	5	0	0	5
TOTAL		610	330	580	1520

ST Program Descriptions:

MODULE I ST101 ANATOMY AND PHYSIOLOGY I

Prerequisites: None.

Total clock hours: 90

This course is a study of the following topics and human systems: pathophysiology, biochemistry, the cell, tissues, bone, muscle, and endocrine systems. The functions and interrelationship of these systems are studied. The course emphasizes the homeostatic nature of these systems with reference to human disease states.

MODULE I ST102 ANATOMY AND PHYSIOLOGY II

Prerequisites: None.

Total clock hours: 90

This course is a study of the following topics and human systems: nervous system, lymphatic, endocrine, blood, cardiovascular, digestive, and respiratory systems. The functions, interrelationship and pathophysiology of these systems are studied. The course emphasizes the homeostatic nature of these systems with reference to human disease states.

MODULE II ST201 MEDICAL TERMINOLOGY

Prerequisites: None.

Total clock hours: 40

This course includes an introduction to medical terminology based on anatomy and physiology. Emphasis is placed on medical word roots, combining forms, prefixes and suffixes, and body structure.

MODULE II ST202 MICROBIOLOGY

Prerequisites: None.

Total clock hours: 30

This course is a study of basic microbiology, infection control, and disease processes to include the body's defense mechanisms to those diseases, and wound healing. Additionally, vital signs and blood borne pathogens will be included.

MODULE II ST203 MEDICAL LAW & ETHICS

Prerequisites: None.

Total clock hours: 20

This course presents an overview of the legalities and ethical behavior associated with medical practice/facility. The AMA and AAMA codes of ethics and OSHA regulations as they apply to the office environment are also studied.

MODULE II ST204 PHARMACOLOGY AND ANESTHESIA

Prerequisites: None.

Total clock hours: 45

This course is the study of drugs with emphasis on concepts related to steps in the drug cycles and side effects. Students will learn major classifications of drugs and usual drug choices for selected diseases and pathological conditions. They will learn appropriate terms, abbreviations, equivalents, and math concepts in calculations of dosages. Different modes of anesthesia will be discussed.

MODULE II ST205 PATIENT PSYCHOLOGY

Prerequisites: None.

Total clock hours: 15

This course is an introduction to the principles and concepts basic to understanding the surgical patient and human behavior. A general overview of the research methods and major research findings of psychology are presented, as well as a survey of current theories used to interpret these findings. Topics covered include methodology, physiology, learning, perception, and cognitive processes, development, motivation and emotion, personality, abnormal behavior, therapy, and social psychology. The special populations patient will be covered in this course such as, but not limited to: Geriatric, Obese, Pediatric and the Diabetic patient.

MODULE II ST206 THE PHYSICAL ENVIRONMENT AND SAFETY

Prerequisites: None.

Total clock hours: 30

This course is an introduction to the physical environment of the operating room as well as safety precautions. Emergency situations will be covered with types of hemostatic and bleeding control in emergencies. The following types of hazards will be covered in this course: Earthquake, Tornado, Tsunami, Hurricane and other natural disasters.

MODULE III ST301 INTRODUCTION TO ST

Prerequisite: ST101-ST301

Total clock hours: 25

This course is designed to orient the student to surgical technology and provide a comprehensive knowledge of patient care concepts, as well as personal and professional relationships in surgical technology.

MODULE III ST302 BIOMEDICAL SCIENCE

Prerequisite: ST101-ST206

Total clock hours: 10

This course introduces the student to computer hardware and software programs. Emphasis is placed on the development of word processing skills, which include techniques for creating, editing, saving, and printing documents. It also includes the safety factors regarding biophysical practices in the OR. Electricity, mechanical robotics, sterilization, chemical, heat, gases, and sounds and vibrations are some of the concerns discussed for patient safety.

MODULE III ST303 ASEPSIS, STERILIZATION AND DISINFECTION

Prerequisite: ST101-ST302

Total clock hours: 30

An overview of the disease process, infection control with emphasis on hand washing techniques, methods of sterilization, instrumentation classification, and first aid procedures will be presented. Universal precautions as well as draping and positioning patients are emphasized. Asepsis will also be introduced.

MODULE III ST304 SURGICAL INSTRUMENTATION

Prerequisite: ST101-ST303

Total clock hours: 50

This course introduces the student to the relationship between instrumentation, equipment, and supplies and quality patient care in the OR; items that require sterilization prior to use in the sterile field; basic instruments by type, function, and name; proper care, handling, and assembly of instruments; types of special equipment utilized in the OR; practice and demonstration of proper care; handling techniques, safety precautions, functions of accessory equipment and demonstration of proper care; handling, and assembly; relationship between instruments, equipment, and supplies; and the OR environment as related to safety.

MODULE III ST305 SUTURES AND WOUND HEALING

Prerequisite: ST101-ST304

Total clock hours: 35

This course introduces wound healing, possible complications of wound healing, classifications of surgical wounds, factors that influence healing and the manner in which they affect the healing process, and common suture terms. Suture materials and stapling devices and their usage, as well as types, characteristics, and uses of natural and synthetic absorbable suture materials are also introduced. Surgical supplies utilized in the operating room will be introduced in this course.

MODULE III ST306 CASE MANAGEMENT

Prerequisite: ST101-ST305

Total clock hours: 30

This course will introduce the steps of basic surgical procedures, preoperative, intraoperative and postoperative case management. Students will learn the basic set-up of the back table and mayo stand, and the natural progression of the surgical case.

MODULE IV ST401 DIAGNOSTIC PROCEDURES AND ASSISTANT CIRCULATOR ROLES

Prerequisite: ST101-ST306

Total clock hours: 40

This course is designed to provide comprehensive knowledge and skills for specific surgical procedures in diagnostic procedures along with the roles of the Assistant Circulator.

MODULE IV ST402 GENERAL, OB/GYN AND UROLOGICAL PROCEDURES

Prerequisite: ST101-ST401

Total clock hours: 30

This course is designed to provide comprehensive knowledge and skills for specific surgical procedures in general, OB/GYN and Urological procedures.

MODULE IV ST403 OPHTHALMOLOGY, ENT, ORAL MAXILLOFACIAL

Prerequisite: ST101-ST402

Total clock hours: 30

This course is designed to provide comprehensive knowledge and skills for specific Ophthalmology, ENT and Oral Maxillofacial procedures.

MODULE IV ST404 PLASTIC AND RECONSTRUCTIVE SURGERY

Prerequisite: ST101-ST403

Total clock hours: 20

This course is designed to provide comprehensive knowledge and skills for specific plastic and reconstructive procedures.

MODULE IV ST 405 VASCULAR AND CARDIOTHORACIC PROCEDURES

Prerequisite: ST101-ST404

Total clock hours: 30

This course is designed to provide comprehensive knowledge and skills for specific vascular, peripheral vascular and cardiothoracic procedures.

MODULE IV ST406 ORTHOPEDIC AND NEUROLOGICAL PROCEDURES

Prerequisite: ST101-ST405

Total clock hours: 30

This course is designed to provide comprehensive knowledge and skills for specific surgical procedures in orthopedic and neurological procedures.

MODULE V ST501 MOCK SURGERY I

Prerequisite: ST101-ST406

Total clock hours: 50

This course is designed to provide comprehensive knowledge and skills for specific surgical procedures in diagnostic, general surgery, orthopedic, neurological, plastic and reconstructive, peripheral vascular, obstetric/gynecology, ophthalmic, otorhinolaryngologic, and oral/maxillofacial surgical procedures for the surgical technologist.

MODULE V ST502 MOCK SURGERY II

Prerequisite: ST101-ST501

Total clock hours: 50

This course is designed to provide comprehensive knowledge and skills for specific surgical procedures in plastic and reconstructive surgery, genitourinary surgery, orthopedic surgery, cardiothoracic surgery, and peripheral vascular surgery procedures for the surgical technologist.

MODULE V ST503 MOCK SURGERY III

Prerequisite: ST101-ST502

Total clock hours: 50

This course is designed to evaluate the student in his/her knowledge and skills in basic surgical preparation and procedures. Students will recall the preparations for anesthesia and pharmaceuticals used, instrumental set-ups, and circulating methods, and will understand the use of different needles and sutures.

MODULE V ST504 CPR

Prerequisite: ST101-ST503

Total clock hours: 5

This course is designed to introduce surgical technology candidates to basic clinical skills, CPR, HIV/AIDS, and OSHA. Emphasis is placed on measurement and recording of temperature, pulse, respiration, blood pressure, height, and weight. Included is a CPR session taught by a certified instructor.

MODULE IV ST505 CAREER DEVELOPMENT

Prerequisite: ST101-ST504

Total clock hours: 10

This course on career development emphasizes computer skills, assessing personal strengths, understanding career expectations, developing job search techniques, and preparing an effective resume.

MODULE V ST506 MOCK CLEARANCE

Prerequisite: ST101-ST505

Total clock hours: 15

In this course, emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic care presentation for selected surgical procedures. The student must pass Mock Surgery I, II, III with an 80% or better in order to move to the clinical phase of the program.

MODULE VI ST601 EXTERNSHIP

Prerequisite: ST101-ST506 with a grade average of B or better

Total clock hours: 615

This course is conducted in a surgical facility and provides students a clinical experience with a variety of preoperative assignments. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic care presentation for selected surgical procedures. Students will observe and take part in surgical procedures and work as members of the surgical team. This course emphasizes and reviews all aspects of the Surgical Technologist program and aims at preparing the student for the National Certification Exam. Students will return to campus on assigned days for CST Exam Review.

MODULE VI STEMX CST EXAM ADMINISTRATION

Prerequisite: ST101-ST601

Total clock hours: 5

The National Board Exam will be administered at the completion of the clinical phase. This is a mandatory exam that is part of the student's graduation requirement.

ST EVALUATION/PROGRESSION POLICY

The CBD ST program is a modular program. All students are admitted as a cohort and the curriculum is designed so that students will complete all of the required courses within 6 Modules. A student must pass all courses in Module I to progress to Module II, must pass all courses in Module II to progress to Module III, etc. A student must pass all Modules to be able to graduate. Each didactic course for all Modules must be passed with a 75% grade point average or higher in lab and theory, and clinical courses with a Pass score. In order to successfully complete Module V students need to pass the Final Lab Practicum and a written Final exam. If a student fails a course at some point in the sequence they will have a chance to repeat a Module.

ST SKILLS LABORATORY

The campus skills laboratory is designed to provide students with assignments to learn the skills necessary for hospital work. Skills should be practiced in the skills laboratory prior to providing skills in the hospital settings.

All surgical technology students are permitted to use the skills lab with their assigned instructors. Food and drinks are not allowed inside the skills laboratory.

All supplies should be handled with care and replaced in their storage areas after use. Items requiring replacement or reordering should be reported to the instructor daily or as needed basis. Mannequins should be handled with care and not have any tape applied directly.

All students are to participate in the maintenance of the campus skills lab.

Students are to wear their clinical uniforms while working in the skills lab. Shoes should be closed toe, low-heeled and clothing should be safe without strings or ties that may become tangled and cause harm to the student or to others.

Always be considerate of others when working in the skills lab.

ST CLINICAL EVALUATION METHOD

Clinical performance is evaluated on a “pass/fail” designation, based upon successful completion of the clinical objectives.

Students with a “fail” grade in any of the skills will meet with the Clinical Coordinator and/or Program Director and receive a plan for improvement which may include but is not limited to Individual/group tutorial in the campus skills lab.

Completion of the clinical module

Successful completion of the clinical module requires:

- completion of all required 580 hours (Maximum 40 hrs/week),
- completion of at least 120 cases.
- a pass grade on the final evaluation.
- 40 hours of Board Exam Preparation.

ST EQUIPMENT AND MATERIALS

- AESOP 1000 Robot
- ALM Surgical Light
- AMSCO 1040 Surgical Table
- AMSCO Surgical Table
- Anesthesia Machine
- Basic Eye Set
- Basic Major Set
- Basic Minor Set
- Birthcher ABC Electrosurgical Generator
- Candy Cane Stirrups with 4 Clamps
- Carr X-Ray Viewing Box
- Castle Surgical Light
- Cataract Set
- D & C Tray
- DVD Player (2)
- Emergency Eyewash Station
- Gallbladder Set
- H & N Tray
- Hand Surgery Board
- Hysterectomy Tray
- Laminectomy Set
- Laparoscopy Instruments
- Laproscopic Tray
- Leibinger Mandible Fracture Combo Set
- Major bone Set
- Manikin
- Mckesson IV Pole
- Minor Bone Set
- Multinex Plus Datascope
- Ohmeda 5500 Airway Pressure Monitor
- Ohmeda 7000 Ventilator
- Oxygen Monitor
- Pedigo Back Table
- Pedigo Kick Bucket
- Pedigo Mayo Stand
- Pedigo Ring Stand-Single, Double
- Pedigo Step Stool
- Quantum 3000 Endoscopy Light Source
- Sterris Scrub Sink
- Storz Endoscope Tricam SL NTSC
- Suctioning Unit
- Televisions (2)
- Thoracic Set
- Tonsilectomy and Adenoidectomy Set
- Tracheostomy Tray
- Vascular Set
- White Board

Books:

- *Body Structures and Functions*
- *Surgical Instrumentation*
- *Medical Terminology for Health Professions*
- *Surgical Technology for the Surgical Technologist*