2006 Mississippi Curriculum Framework

Postsecondary Surgical Technology

(Program CIP: 51.0909 – Surgical Technology/Technologist)

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Published by

Office of Vocational Education and Workforce Development
Mississippi Department of Education
Jackson, Mississippi 39205

Research and Curriculum Unit for Workforce Development
Vocational and Technical Education
Mississippi State University
Mississippi State, Mississippi 39762

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Workplace Skills for the 21st Century	Secretary's Commission on Achieving Necessary Skills

National Educational Technology Standards for Students

Foreword

As the world economy continues to evolve, businesses and industries must adopt new practices and processes in order to survive. Quality and cost control, work teams and participatory management, and an infusion of technology are transforming the way people work and do business. Employees are now expected to read, write, and communicate effectively; think creatively, solve problems, and make decisions; and interact with each other and the technologies in the workplace. Vocational-technical programs must also adopt these practices in order to provide graduates who can enter and advance in the changing work world.

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact on local vocational-technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and vocational skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide vocational educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses which focus on the development of occupational competencies. Each vocational-technical course in this sequence has been written using a common format which includes the following components:

- Course Name – A common name that will be used by all community/junior colleges in reporting students.

- Course Abbreviation – A common abbreviation that will be used by all community/junior colleges in reporting students.

- Classification – Courses may be classified as:
    - Vocational-technical core – A required vocational-technical course for all students.
    - Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs.
    - Vocational-technical elective – An elective vocational-technical course.
    - Related academic course – An academic course which provides academic skills and knowledge directly related to the program area.
    - Academic core – An academic course which is required as part of the requirements for an Associate degree.

- Description – A short narrative which includes the major purpose(s) of the course and the recommended number of hours of lecture and laboratory activities to be conducted each week during a regular semester.

- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course.

- Corequisites – A listing of courses that may be taken while enrolled in the course.

- Competencies and Suggested Objectives – A listing of the competencies (major concepts and performances) and of the suggested student objectives that will enable students to demonstrate mastery of these competencies.

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75 percent of the time allocated to each course. The remaining 25 percent of each course should be developed at the local district level and may reflect:
    - Additional competencies and objectives within the course related to topics not found in the State framework, including activities related to specific needs of industries in the community college district.
    - Activities which develop a higher level of mastery on the existing competencies and suggested objectives.
    - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed/revised.
    - Activities which implement components of the Mississippi Tech Prep initiative, including integration of academic and vocational-technical skills and coursework, school-to-work transition activities, and articulation of secondary and postsecondary vocational-technical programs.
    - Individualized learning activities, including worksite learning activities, to better prepare individuals in the courses for their chosen occupational area.

- Sequencing of the course within a program is left to the discretion of the local district. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors.

- Programs that offer an Associate of Applied Science degree must include a minimum 15 semester credit hour academic core. Specific courses to be taken within this core are to be determined by the local district. Minimum academic core courses are as follows:
    - 3 semester credit hours — Math/Science Elective
    - 3 semester credit hours — Written Communications Elective
    - 3 semester credit hours — Oral Communications Elective
    - 3 semester credit hours — Humanities/Fine Arts Elective
    - 3 semester credit hours — Social/Behavioral Science Elective

It is recommended that courses in the academic core be spaced out over the entire length of the program, so that students complete some academic and vocational-technical courses each semester. Each community/junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

- In instances where secondary programs are directly related to community and junior college programs, competencies and suggested objectives from the high school programs are listed as Baseline Competencies. These competencies and objectives reflect skills and knowledge that are directly related to the community and junior college vocational-technical program. In adopting the curriculum framework, each community and junior college is asked to give assurances that:
    - Students who can demonstrate mastery of the Baseline Competencies do not receive duplicate instruction, and
    - Students who cannot demonstrate mastery of this content will be given the opportunity to do so.

- The roles of the Baseline Competencies are to:
    - Assist community/junior college personnel in developing articulation agreements with high schools, and
    - Ensure that all community and junior college courses provide a higher level of instruction than their secondary counterparts.

- The Baseline Competencies may be taught as special "Introduction" courses for 3-6 semester hours of institutional credit which will not count toward Associate degree requirements. Community and junior colleges may choose to integrate the Baseline Competencies into ongoing courses in lieu of offering the "Introduction" courses or may offer the competencies through special projects or individualized instruction methods.

- Technical elective courses have been included to allow community colleges and students to customize programs to meet the needs of industries and employers in their area.

In order to provide flexibility within the districts, individual courses within a framework may be customized by:

- Adding new competencies and suggested objectives.
- Revising or extending the suggested objectives for individual competencies.
- Integrating baseline competencies from associated high school programs.
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the State Board for Community and Junior Colleges [SBCJC] of the change).

In addition, the curriculum framework as a whole may be customized by:

- Resequencing courses within the suggested course sequence.
- Developing and adding a new course which meets specific needs of industries and other clients in the community or junior college district (with SBCJC approval).
- Utilizing the technical elective options in many of the curricula to customize programs.

Table of Contents

Program Description

Surgical Technology is an instructional program that prepares an individual to serve as a member of the surgical team to work with surgeons, anesthesiologists, certified registered nurse anesthetists, registered nurses, and other surgical personnel in delivering patient care and assuming appropriate responsibilities before, during, and after surgery. This program includes the education of all aspects of surgical technology including the role of second assistant and circulator.

Graduates of the 12-month program will be awarded the Certificate of Surgical Technology. The Associate of Applied Science Degree in Surgical Technology will be awarded to the successful graduate of the 24-month program. Qualified graduates may apply to the Liaison Council on Certification for the Surgical Technologist for the National Certification Examination and become a Certified Surgical Technologist.

Industry standards are based on the *Core Curriculum for Surgical Technology*.

Suggested Course Sequence*
Surgical Technology

Baseline Competencies for Surgical Technology**

FIRST YEAR (CERTIFICATE)

3 sch Fundamentals of Surgical Technology (SUT 1113)
6 sch Principles of Surgical Technique (SUT 1216)
4 sch Surgical Anatomy (SUT 1314)
3 sch Surgical Microbiology (SUT 1413)
3 sch Written Communications Elective

19 sch

8 sch Basic and Related Surgical Procedures (SUT 1518)
8 sch Specialized Surgical Procedures (SUT 1528)

16 sch

SUMMER TERM (8-weeks)

8 sch Advanced Surgical Procedures (SUT 1538)

SECOND YEAR (TECHNICAL)

3 sch Oral Communications Elective
3 sch Humanities/Fine Arts Elective
3 sch Approved Electives***
4 sch Anatomy and Physiology I (BIO 1514)
3 sch Math/Science Elective

16 sch

4 sch Microbiology (BIO 2924)
3 sch Social/Behavioral Science Elective
3 sch Approved Electives***
4 sch Anatomy and Physiology II (BIO 1524)

14 sch

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

** Baseline competencies are taken from the high school Allied Health program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

***APPROVED ELECTIVES

General Chemistry I (CHE 1213) with General Chemistry Laboratory I (CHE 1211)
General Biology I (BIO 1134)
General Biology II (BIO 1144)
Algebra (MAT 1313 or higher)
Child Psychology (Human Growth and Development I) (EPY 2513)
Adolescent Psychology (Human Growth and Development II) (EPY 2523)
Nutrition (HEC 1253)
Personal and Community Health I (HPR 1213)
Personal and Community Health II (HPR 1223)
Marriage and Family (SOC 2143)
Certification and Role Transition (SUT 1703)

Surgical Technology Courses

Course Name: Fundamentals of Surgical Technology

Course Abbreviation: SUT 1113

Classification: Vocational-Technical Core

Description: This is a basic introductory course including hospital and surgical suite organization and environment, history, legal responsibilities, terminology, interpersonal relationships, pharmacology, and anesthesia. (3 sch: 3 hr. lecture)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Interpret a job description for a surgical technologist. a. Using the Internet, trace the history, development, education, certification, and role of the surgical technologist. b. Explain surgical conscience as it applies to the surgical technologist and other personnel in the operating room. c. Describe the role and function of each member of the surgical team. d. Describe the physical characteristics and environmental standards of the surgery suite. e. Explain hospital and surgery organization. f. Identify principles of communication and interpersonal relationships as they relate to operating room personnel. g. Interpret the ethical, moral, and legal responsibilities of the surgical technologist, including HIPAA.
2. Interpret various word parts of medical terms. a. Identify various medical terms relating to surgery including abbreviations and symbols. b. Pronounce various medical terms relating to surgery including abbreviations and symbols. c. Spell various medical terms relating to surgery including abbreviations and symbols.
3. Identify the drugs and anesthesia used in the care of the surgical patient. a. Identify the principles and concepts for the use and administration of surgical drugs and anesthetic agents. b. Convert temperature, lengths, weights, and capacities to the metric system.
4. Discuss principles of environmental safety procedures. a. Apply knowledge in the OR to include electricity, fire, radiation, physics, and laser principles. b. Explain the information included in Material Safety Data Sheets. c. Discuss the Centers for Disease Control (CDC) Standard Precautions Guidelines and Recommendations as applied to the surgical suite. d. Demonstrate proper body mechanics as applied to the surgical environment.
5. Apply computer knowledge to the educational process and safe patient care practices in the operating room. a. Identify the basic components of a computer system.

b. Perform basic word processing. c. Perform graphics importation. d. Print and save computer information. e. Perform Internet functions.
6. Apply information effectively using written, verbal, and electronic formats. a. Recognize when information is needed. b. Locate information using a variety of sources. c. Evaluate information obtained from a variety of sources.

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT2 Related science
SGT3 Biomedical science
SGT4 Patient care concepts
SGT5 Nonsterile responsibilities
SGT6 Sterile responsibilities
SGT8 Professional management
SGT9 Self management
SGT10 Workplace management

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
M1 Addition of Whole Numbers (no regrouping, regrouping)
M2 Subtraction of Whole Numbers (no regrouping, regrouping)
M3 Multiplication of Whole Numbers (no regrouping, regrouping)
M4 Division of Whole Numbers (no remainder, remainder)
M5 Decimals (addition, subtraction, multiplication, division)
M6 Fractions (addition, subtraction, multiplication, division)
M7 Integers (addition, subtraction, multiplication, division)
M8 Percents
A2 Number Theory (ratio, proportion)
A3 Data Interpretation (graph, table, chart, diagram)
A5 Measurement (money, time, temperature, length, area, volume)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)

L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

Allmers, N. M., & Verderame, J. A. (2003). *Appleton and Lange review for the surgical technology examination* (5th ed.). New York: McGraw Hill.

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Course Name: Principles of Surgical Technique

Course Abbreviation: SUT 1216

Classification: Vocational-Technical Core

Description: This course is a comprehensive study of aseptic technique, safe patient care, and surgical techniques. (6 sch: 1 hr. lecture, 10 hr. lab)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Identify pre-op routines. a. Explain pre-op routines. b. Conduct pre-op routines.
2. Identify the procedures for positioning, prepping, and draping of the surgical patient. a. Explain positioning, prepping, and draping. b. Demonstrate positioning, prepping, and draping.
3. Discuss the concepts of asepsis. a. Discuss the principles and concepts of aseptic technique. b. Demonstrate the application of aseptic technique.
4. Identify categories, functions, and names of basic instruments. a. Explain categories, functions, and names of basic instruments. b. Demonstrate the care, handling, and uses of basic instruments.
5. Identify surgical supplies and equipment. a. Explain surgical supplies and equipment. b. Demonstrate the applications of various supplies and equipment. c. Discuss the basic concepts related to robotics.
6. Identify wound closure materials. a. Explain categories and usage of wound closure materials. b. Demonstrate handling, selection, and usage of wound closure materials.
7. Identify basic case preparation for surgical procedures. a. Discuss the establishment and maintenance of a sterile field. b. Demonstrate the establishment and maintenance of a sterile field in the lab setting.

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT3 Biomedical science
SGT4 Patient care concepts
SGT5 Nonsterile responsibilities
SGT6 Sterile responsibilities
SGT9 Self management
SGT10 Workplace management

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
M1 Addition of Whole Numbers (no regrouping, regrouping)
A1 Numeration (ordering, place value, scientific notation)
A2 Number Theory (ratio, proportion)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L4 Capitalization (proper noun, titles)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

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Course Name: Surgical Anatomy

Course Abbreviation: SUT 1314

Classification: Vocational-Technical Core

Description: Emphasis is placed on the structure and function of the human body as related to surgery. Application of the principles of surgical anatomy to participation in clinical experience. (4 sch: 4 hr. lecture)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Explain the integrated structures and function of body systems including cells, tissues, organs, and systems as they relate to physiologic integrity. a. Describe the organization of the body. b. Define anatomical terminology. c. Describe the basic anatomical structure and function of cells, tissues, organs, and systems.
2. Locate and describe the basic function(s) and structure of the following systems: a. Integumentary b. Muscular c. Skeletal d. Nervous e. Sensory f. Endocrine g. Circulatory h. Lymphatic i. Respiratory j. Digestive k. Urinary l. Reproductive (male and female)

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT1 Basic science
SGT2 Related science

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)

R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools

SUGGESTED REFERENCES

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Course Name: Surgical Microbiology

Course Abbreviation: SUT 1413

Classification: Vocational-Technical Core

Description: This is an introduction to pathogenic microorganisms related to surgery and their effect on wound healing and infection. It includes principles of sterilization and disinfection. (3 sch: 3 hr. lecture)

Corequisites: All first semester courses

Competencies and Suggested Objectives
1. Explain the relationship between humans and pathogenic and nonpathogenic bacteria. a. Distinguish between the various organisms and their diseases. b. List the means of controlling the transmission of infections. c. Select ways the body resists pathogens. d. Discuss types of immune responses.
2. Discuss wound healing. a. Discuss the types of wounds. b. Explain the classifications of wounds. c. Explain the stages of wound healing. d. Discuss wound complications.
3. Discuss physical and chemical methods used to protect patients and workers from invasion by pathogenic microbes. a. Describe the physical methods of antimicrobial control and an application of each. b. Describe ways in which chemicals kill or inhibit bacterial growth.
4. Identify the techniques of sterilization. a. List methods and principles of sterilization and the advantages and disadvantages of each. b. Discuss monitoring methods. c. Describe the methods and principles of disinfection. d. Demonstrate sterilization and/or disinfection of surgical supplies.

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT1 Basic science
SGT2 Related science

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)

R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
A3 Data Interpretation (graph, table, chart, diagram)
A5 Measurement (money, time, temperature, length, area, volume)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
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WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

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Course Name: Basic and Related Surgical Procedures

Course Abbreviation: SUT 1518

Classification: Vocational-Technical Core

Description: This course includes instruction in regional anatomy, pathology, instrumentation, and surgical techniques in general surgery, gynecology, obstetrics, and urology. It requires clinical experience in area hospital surgical suites and related departments. (8 sch: 4 hr. lecture, 12 hr. clinical)

Prerequisites: CPR-Health Care Provider and all first semester courses

Competencies and Suggested Objectives
1. Discuss the relevant anatomy, indications for surgery, and patient preparation for general, gynecological, obstetrical, and urological procedures. a. Identify regional anatomy and pathology. b. Identify diagnostic procedures. c. Discuss the intra-operative preparation of the patient.
2. Discuss equipment, supplies, and instruments for general, gynecological, obstetrical, and urological procedures. a. Identify instruments, equipment, and supplies. b. Demonstrate use of instruments, equipment, and supplies.
3. Discuss surgical procedures and possible complications for general, gynecological, obstetrical, and urological procedures. a. Explain surgical procedures. b. Identify possible complications. c. Follow the sequence of procedures by anticipating the needs of the surgeon in each of the following roles: (1) Scrub-Surgical Technologist. (2) 2nd Assisting Surgical Technologist. (3) Circulating Surgical Technologist.

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT1 Basic science
SGT2 Related science
SGT3 Biomedical science
SGT4 Patient care concepts
SGT5 Nonsterile responsibilities
SGT6 Sterile responsibilities
SGT7 Surgical interventions
SGT8 Professional management
SGT9 Self management

SGT10 Workplace management

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
M1 Addition of Whole Numbers (no regrouping, regrouping)
A2 Number Theory (ratio, proportion)
A5 Measurement (money, time, temperature, length, area, volume)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

Allmers, N. M., & Verderame, J. A. (2003). *Appleton and Lange review for the surgical technology examination* (5th ed.). New York: McGraw Hill.

Association of Surgical Technologists. (1995). *Surgical technologist certifying exam study guide*. Littleton, CO: Author.

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Phillips, N. (2003). *Berry & Kohn's operating room technique* (10th ed.). St. Louis, MO: Mosby.

Venes, D., Thomas, C. L., & Taber, C. W. (Eds.). (2001). *Taber's cyclopedic medical dictionary* (19th ed.). Philadelphia: F. A. Davis.

Course Name: Specialized Surgical Procedures

Course Abbreviation: SUT 1528

Classification: Vocational-Technical Core

Description: This course includes instruction in regional anatomy, pathology, instrumentation, and techniques in surgical specialty areas of ear, nose, and throat; eye; oral and maxillofacial surgery; pediatrics; and plastics. This course requires clinical experience in area hospital surgical suite and related departments. (8 sch: 4 hr. lecture, 12 hr. clinical)

Prerequisites: CPR-Health Care Provider and all first semester courses

Competencies and Suggested Objectives
1. Explain the relevant anatomy, indications for surgery, and patient preparation for ear, nose, throat, eye, plastics, pediatric, and oral and maxillofacial surgery. a. Identify regional anatomy and pathology. b. Identify diagnostic procedures. c. Discuss the intra-operative preparation of the patient.
2. Explain equipment, supplies, and instruments for ear, nose, throat, eye, plastics, pediatrics, and oral and maxillofacial surgery. a. Identify instruments, equipment, and supplies. b. Demonstrate use of instruments, equipment, and supplies.
3. Explain surgical procedures and possible complications for ear, nose, throat, eye, plastics, pediatrics, and oral and maxillofacial surgery. a. Explain surgical procedures. b. Identify possible complications. c. Follow the sequence of procedures by anticipating the needs of the surgeon in each of the following roles: (1) Scrub-Surgical Technologist. (2) 2nd Assisting Surgical Technologist. (3) Circulating Surgical Technologist.

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT1 Basic science
SGT2 Related science
SGT3 Biomedical science
SGT4 Patient care concepts
SGT5 Nonsterile responsibilities
SGT6 Sterile responsibilities
SGT7 Surgical interventions
SGT8 Professional management
SGT9 Self management

SGT10 Workplace management

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
M1 Addition of Whole Numbers (no regrouping, regrouping)
A2 Number Theory (ratio, proportion)
A5 Measurement (money, time, temperature, length, area, volume)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

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Association of Surgical Technologists. (1995). *Surgical technologist certifying exam study guide*. Littleton, CO: Author.

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Meeker, M. H., & Rothrock, J. C. (2003). *Alexander's care of the patient in surgery* (12th ed.). St. Louis, MO: Mosby.

Phillips, N. (2003). *Berry & Kohn's operating room technique* (10th ed.). St. Louis, MO: Mosby.

Venes, D., Thomas, C. L., & Taber, C. W. (Eds.). (2001). *Taber's cyclopedic medical dictionary* (19th ed.). Philadelphia: F. A. Davis.

Course Name: Advanced Surgical Procedures

Course Abbreviation: SUT 1538

Classification: Vocational-Technical Core

Description: This course includes instruction in regional anatomy, pathology, instrumentation, and techniques in surgical specialty areas of orthopedics, neurosurgery, thoracic, peripheral vascular, cardiovascular surgery, and employability skills. This course requires clinical experience in area hospital surgical suites and related departments and a comprehensive final examination. (8 sch: 4 hr. lecture, 12 hr. clinical)

Prerequisites: CPR-Health Care Provider and all second semester courses

Competencies and Suggested Objectives
1. Discuss the relevant anatomy, indications for surgery, and patient preparation for orthopedics, neurosurgery, thoracic, peripheral vascular, and cardiovascular surgery. a. Identify regional anatomy and pathology. b. Identify diagnostic procedures. c. Discuss the intra-operative preparation of the patient.
2. Discuss equipment, supplies, and instruments for orthopedics, neurosurgery, thoracic, peripheral vascular, cardiovascular surgery. a. Identify instruments, equipment, and supplies. b. Demonstrate the use of instruments, equipment, and supplies.
3. Discuss surgical procedures and possible complications for orthopedics, neurosurgery, thoracic, peripheral vascular, and cardiovascular surgery. a. Explain surgical procedures. b. Identify possible complications. c. Follow the sequence of procedures by anticipating the needs of the surgeon in each of the following roles: (1) Scrub-Surgical Technologist. (2) 2nd Assisting Surgical Technologist. (3) Circulating Surgical Technologist.
4. Demonstrate employability and job retention skills. a. Discuss the transition from student to employee. b. Identify positive employee characteristics. c. Develop a professional resume. d. Complete a job application. e. Discuss interview skills. f. Write a letter of resignation. g. Discuss national certification and continuing education.

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT1 Basic science
SGT2 Related science
SGT3 Biomedical science
SGT4 Patient care concepts
SGT5 Nonsterile responsibilities
SGT6 Sterile responsibilities
SGT7 Surgical interventions
SGT8 Professional management
SGT9 Self management
SGT10 Workplace management

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
M1 Addition of Whole Numbers (no regrouping, regrouping)
A2 Number Theory (ratio, proportion)
A5 Measurement (money, time, temperature, length, area, volume)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.

WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
T2 Social, ethical, and human issues
T3 Technology productivity tools
T4 Technology communications tools
T5 Technology research tools
T6 Technology problem-solving and decision-making tools

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Phillips, N. (2003). *Berry & Kohn's operating room technique* (10th ed.). St. Louis, MO: Mosby.

Venes, D., Thomas, C. L., & Taber, C. W. (Eds.). (2001). *Taber's cyclopedic medical dictionary* (19th ed.). Philadelphia: F. A. Davis.

Course Name: Certification and Role Transition

Course Abbreviation: SUT 1703

Classification: Vocational-Technical Elective

Description: An in-depth study of the role of the surgical technologist and review for the certification examination. The course examines liability and legal issues of practice, adapting critical thinking skills to a variety of practice settings, effective team and professional behaviors, continuing education, and ethical issues. Practice on computer simulations is required. (3 sch: 3 hr. lecture)

Prerequisite: None

Competencies and Suggested Objectives
1. Identify desirable characteristics of a surgical technologist. a. Examine legal and ethical issues that may affect the practice of surgical technology and appropriate actions. b. Identify effective behaviors in relationship with team members. c. Discuss conflict resolution in the workplace. d. Describe characteristics of an effective leader and team member.
2. Explore employment and employee responsibility. a. Prepare letters of application and resignation. b. Demonstrate through role play appropriate behaviors in a job interview. c. Discuss a typical hospital orientation program. d. Discuss “on call” and “call back” responsibilities.
3. Identify factors that promote effective transition from the role of student to the role of employee. a. Complete a student case log. b. Complete an application for national certification exam. c. Utilize computer simulation to enhance critical thinking skills.

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT3 Biomedical science
SGT8 Professional management
SGT9 Self management
SGT10 Workplace management

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)

R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
M1 Addition of Whole Numbers (no regrouping, regrouping)
M2 Subtraction of Whole Numbers (no regrouping, regrouping)
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

Workplace Skills for the 21st Century

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
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WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

T1 Basic operations and concepts
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Association of Surgical Technologists. (2001). *Surgical technology for the surgical technologist: A positive care approach*. Albany, NY: Delmar.

Goldman, M. A. (1996). *Pocket guide to the operating room* (2nd ed.). Philadelphia: F. A. Davis.

Meeker, M. H., & Rothrock, J. C. (2003). *Alexander's care of the patient in surgery* (12th ed.). St. Louis, MO: Mosby.

Phillips, N. (2003). *Berry & Kohn's operating room technique* (10th ed.). St. Louis, MO: Mosby.

Venes, D., Thomas, C. L., & Taber, C. W. (Eds.). (2001). *Taber's cyclopedic medical dictionary* (19th ed.). Philadelphia: F. A. Davis.

Recommended Tools and Equipment*

CAPITALIZED ITEMS

1. Bandaging Simulator (1 per program)
2. Basin Stand, Ring Stand (4 per program)
3. Board, Roller/Transfer (1 per program)
4. Devices, Positioning (2 prone, 2 lateral, 2 sitting, 2 lithotomy, 2 supine per program)
5. Dilation and Curettage Set (1 per program)
6. GYN Instrument Tray (1 per program)
7. Minor Surgical Instrument Set (2 per program)
8. Electrocautery Unit (1 per program)
9. Laparotomy Instrument Set (1 per room)
10. Chest Instrument Set (1 per program)
11. Basic Bone Instrument Set (1 per program)
12. Mannequin, Teaching, Adult (1 per room)
13. Mayo Stand (4 per room)
14. Tonsil and Adenoid Set (1 per program)
15. Vaginal Hysterectomy Tray (1 per program)
16. Stretcher, Patient, with Brakes and Siderails (1 per program)
17. Table, Surgical with Armboards (1 per room)
18. Table, Instrument (2 per room)
19. Prep Table/stand (2 per room)
20. I.V. Poles (2 per room)
21. Standing Platforms (2 per room)
22. Handtable (1 per program)
23. Instrument Containers (1 per room)
24. Surgical Lights (1 per room)
25. Autoclave (1 per program)
26. Computer, with CD-ROM and Super VGA color monitor (1 per 3 students)
27. Printer, Laser (1 per 2 computers)
28. Basic Open Reduction Internal Fixation Set (1 per program)
29. Basic Large Fragment Set (1 per program)
30. Refurbished or Demonstration Unit for Laparoscopic Procedures to include 1 Scope, 1 Camera, and 1 Monitor (1 set per program)
31. Human Skeleton with Stand (1 per program)

NON-CAPITALIZED ITEMS

1. Manual Sphygmomanometer, Adult (1 per 2 students)
2. Sheets, Full Flat (4 per stretcher or table)
3. Pillows (2 per stretcher or table)
4. Stethoscope (1 per 2 students)
5. Kick Bucket with Coasters (2 per room)
6. Pneumatic Tourniquet Cuffs (1 double adult, 1 upper extremity adult, 1 lower extremity adult per program)

7. Thermometer, Electronic Digital (1 per program)
8. Straps, Restraint (1 set per room)
9. Sitting Stool (2 per program)
10. Ear Model (1 per program)
11. Eye Model (1 per program)
12. Heart Model (1 per program)
13. Model, Teaching, Adult (Internal Organ) (1 per program)
14. Model, Knee Joint (1 per program)
15. Human Lumbar Spine (1 per program)
16. Laminated Anatomy Posters (1 set per program)
17. Laminated Instrument Posters (1 set per program)
18. Stethoscope, Dual Training (2 per program)
19. Glo-Germ Light Kit (1 per program)

* The use of refurbished or demonstration equipment is recommended.

RECOMMENDED INSTRUCTIONAL AIDS

It is recommended that instructors have access to the following items:

1. DVD/VCR
2. LCD/Overhead Projector
3. TV, Color Monitor, 25" (1 per program)
4. VCR with Remote Control (1 per program)
5. Cart, TV/VCR (1 per program)
6. Bookcase/display Shelving (1 per program)
7. File Cabinet, Lockable (2 per teacher)
8. Computer Table (1 per computer)
9. Computer Chairs (1 per table)

Student Competency Profile for Surgical Technology

Student:_____

This record is intended to serve as a method of noting student achievement of the competencies in each unit. Noted in parentheses beside each unit is the cluster competency from the MS-CPAS. This form may be duplicated for each student and serve as a cumulative record of competencies achieved in the course.

As an alternative to the use of this form, you may note competency achievement by attaching a report showing comparable results for each student. Please indicate that you are using this alternative report by checking here. _____

Fundamentals of Surgical Technology (SUT 1113)

_____1. Interpret a job description for a surgical technologist.
_____2. Interpret various word parts of medical terms.
_____3. Identify the drugs and anesthesia used in the care of the surgical patient.
_____4. Discuss principles of environmental safety procedures.
_____5. Apply computer knowledge to the educational process and safe patient care practices in the operating room.
_____6. Apply information effectively using written, verbal, and electronic formats.

Principles of Surgical Technique (SUT 1216)

_____1. Identify pre-op routines.
_____2. Identify the procedures for positioning, prepping, and draping of the surgical patient.
_____3. Discuss the concepts of asepsis.
_____4. Identify categories, functions, and names of basic instruments.
_____5. Identify surgical supplies and equipment.
_____6. Identify wound closure materials.
_____7. Identify basic case preparation for surgical procedures.

Surgical Anatomy (SUT 1314)

_____1. Explain the integrated structures and function of body systems including cells, tissues, organs, and systems as they relate to physiologic integrity.
_____2. Locate and describe the basic function(s) and structure of body systems.

Surgical Microbiology (SUT 1413)

_____1. Explain the relationship between humans and pathogenic and nonpathogenic bacteria.
_____2. Discuss wound healing.
_____3. Discuss physical and chemical methods used to protect patients and workers from invasion by pathogenic microbes.

_____4. Identify the techniques of sterilization.

Basic and Related Surgical Procedures (SUT 1518)

_____1. Discuss the relevant anatomy, indications for surgery, and patient preparation for general, gynecological, obstetrical, and urological procedures.
_____2. Discuss equipment, supplies, and instruments for general, gynecological, obstetrical, and urological procedures.
_____3. Discuss surgical procedures and possible complications for general, gynecological, obstetrical, and urological procedures.

Specialized Surgical Procedures (SUT 1528)

_____1. Explain the relevant anatomy, indications for surgery, and patient preparation for ear, nose, throat, eye, plastics, pediatric, and oral and maxillofacial surgery.
_____2. Explain equipment, supplies, and instruments for ear, nose, throat, eye, plastics, pediatrics, and oral and maxillofacial surgery.
_____3. Explain surgical procedures and possible complications for ear, nose, throat, eye, plastics, pediatrics, and oral and maxillofacial surgery.

Advanced Surgical Procedures (SUT 1538)

_____1. Discuss the relevant anatomy, indications for surgery, and patient preparation for orthopedics, neurosurgery, thoracic, peripheral vascular, and cardiovascular surgery.
_____2. Discuss equipment, supplies, and instruments for orthopedics, neurosurgery, thoracic, peripheral vascular, cardiovascular surgery.
_____3. Discuss surgical procedures and possible complications for orthopedics, neurosurgery, thoracic, peripheral vascular, and cardiovascular surgery.
_____4. Demonstrate employability and job retention skills.

Certification and Role Transition (SUT 1703)

_____1. Identify desirable characteristics of a surgical technologist.
_____2. Explore employment and employee responsibility.
_____3. Identify factors that promote effective transition from the role of student to the role of employee.

Baseline Competencies

The following competencies and suggested objectives are taken from the publication *Mississippi Curriculum Framework for Allied Health*. These competencies and objectives represent the baseline which was used to develop the community/junior college Surgical Technology courses. Students enrolled in postsecondary courses should either (1) have documented mastery of these competencies, or (2) be provided with these competencies before studying the advanced competencies in the Surgical Technology program.

Baseline competencies may be integrated into existing courses in the curriculum or taught as special "Introduction" courses. The "Introduction" courses may be taught for up to six semester hours of institutional credit and may be divided into two courses. If the Baseline Competencies are to be taught as "Introduction" courses, each course should be at least 3 credit hours. The following course number(s) and description should be used.

Course Name(s): Introduction to Surgical Technology, Introduction to Surgical Technology I, or Introduction to Surgical Technology II

Course Abbreviation(s): SUT 100(3-6), SUT 1013, SUT 1023

Classification: Vocational-Technical Core

Description: These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

Competencies and Suggested Objectives:

1. Review material related to course and professional organizations.
   a. Identify student and course expectations.
   b. Identify allied health professional student organizations and their roles in individual career development.
   c. Compare the timeline of medical history.
2. Recognize safety procedures and policies.
   a. Describe basic safety procedures.
   b. Describe accident prevention methods and disaster plans of the local school district.
   c. Discuss a safe and clean environment.
   d. Follow state and facility guidelines, including dress requirements for clinical-type experiences.
3. Explain effective communication skills.
   a. Identify the main factors required for the communication process.
   b. Identify factors which can interfere with the communication process.
   c. Demonstrate effective teamwork skills.
   d. Explore professional literature and medical references.

4. Introduce careers in the health care industry.
    a. Introduce careers in health care information and administration.
    b. Introduce careers in direct health care.
    c. Introduce careers in medical therapy.
    d. Introduce careers in diagnostic health care.
5. Discuss education and credentials required for health care careers.
    a. Discuss educational levels for health careers, including certification, associate degree, bachelor's degree, master's degree, and doctoral degree.
    b. Compare the credentials needed for careers in health care, including certification, registration, and licensure.
6. Discuss professional ethics.
    a. Explain professional ethics.
    b. Discuss confidentiality.
    c. Discuss HIPAA, the Health Insurance Portability and Accountability Act of 1996.
7. Discuss legal responsibility and client's rights.
    a. Explain torts and legal responsibility.
    b. Identify ways to promote clients' rights and privacy.
    c. Discuss the requirement for health care workers to undergo a background check.
8. Explain standard precautions.
    a. Explain importance of standard precautions in life practices and health care.
    b. Explain the state and federal government's role in standard precautions.
    c. Relate standard precautions to the transmission of infectious diseases including HIV, AIDS, HBV, and TB.
9. Utilize standard precautions.
    a. Demonstrate hand-washing technique.
    b. Demonstrate donning and removing clean gloves.
10. Perform basic emergency procedures.
    a. Explain first aid procedures for sudden illness.
    b. Explain first aid procedures for accidents.
11. Perform advanced emergency procedures.
    a. Perform CPR.
    b. Demonstrate first aid for an obstructed airway.
12. Explain medical terminology.
    a. Spell designated medical terms correctly.
    b. Demonstrate the use of medical references to spell medical terms correctly.
    c. Define and divide medical terms into root words, prefixes, and suffixes.
13. Recognize and use medical terminology.
    a. Interpret the common medical abbreviations and symbols including meanings and uses.
    b. Demonstrate the use of medical terms and abbreviations in reading, speaking, interpreting, and writing simulated medical records.
14. Review the relationship among cells, tissues, organs, and systems.
    a. Review the main parts of a cell.
    b. Review the functions of the main parts of a cell.
    c. Compare types of tissues and their relationships to body organs and systems.
15. Identify the body planes, directions, and cavities.
    a. Identify the names of the planes and the directional terms.

   b. Locate the body cavities.
   c. Identify the body organs in each cavity.
   d. Describe the abdominal regions.
16. Interpret the basic structures and functions of the integumentary system.
   a. Identify the parts of the integumentary system.
   b. Explain the functions of the integumentary system.
   c. Discuss related diseases and disorders.
17. Perform the patient care procedures related to the integumentary system.
   a. Demonstrate patient hygiene.
   b. Perform bed-making skills.
   c. Perform patient positioning to prevent pressure areas.
18. Interpret the basic structures and functions of the muscular system.
   a. Identify major muscles.
   b. Explain the function of the muscles.
   c. Discuss related diseases and disorders.
   d. Demonstrate active range of motion exercises and indications for use.
19. Interpret the basic structure and function of the skeletal system.
   a. Identify the bones of the body.
   b. Explain functions of the skeletal system.
   c. Discuss related diseases and disorders.
   d. Demonstrate procedures for patient transfer using a stretcher, wheelchair, or a pneumatic lift.
20. Interpret the basic structures and functions of the circulatory system.
   a. Identify components of blood and their function.
   b. Identify the types of blood vessels and the action of each.
   c. Identify the anatomy of the heart.
   d. Explain the flow of blood through the heart.
   e. Discuss related diseases and disorders.
21. Measure vital signs.
   a. Measure oral temperature.
   b. Explain procedures for measuring axillary, rectal, and tympanic temperatures.
   c. Identify the body's pulse points.
   d. Demonstrate radial pulse measurement.
   e. Measure blood pressure.
22. Interpret the basic structures of the respiratory system.
   a. Identify the structures of the respiratory system.
   b. Discuss related diseases and disorders.
   c. Auscultate lung sounds.
23. Interpret the basic functions of the respiratory system.
   a. Discuss how gas exchange occurs in the lungs.
   b. Recognize factors that cause respiratory disorders.
   c. Count respirations.
24. Interpret the basic structures and functions of the digestive system.
   a. Identify organs of the digestive system.
   b. Discuss the functions of organs of the digestive system.
   c. Discuss related diseases and disorders.

25. Examine the relationship of food and health.
    a. Define terms associated with nutrition.
    b. Identify the components of the food guide pyramid with examples of each.
    c. Describe basic therapeutic diets.
    d. Demonstrate how to assist/feed a patient with a disability.
26. Interpret the basic structures and functions of the urinary system.
    a. Identify structures of the urinary system.
    b. State the functions of each structure of the urinary system.
    c. Discuss related diseases and disorders.
27. Determine the importance of intake and output measurement.
    a. Define terms associated with intake and output.
    b. Calculate intake and output measurements.
    c. Convert intake and output measurements to metric equivalents.
    d. Discuss urinary catheterization in classroom lab setting.
28. Interpret the basic structures and functions of the nervous system.
    a. Identify the major structures and functions of the nervous system.
    b. Recognize procedures for neurological exam.
    c. Perform neurological exams.
    d. Discuss related diseases and disorders.
29. Interpret basic structure and functions of the sensory systems.
    a. Label the basic structures of the sensory organs.
    b. Identify the functions of the sensory organs.
30. Interpret the basic structures and functions of the female reproductive system.
    a. Identify the major structures and functions of the female reproductive system.
    b. Discuss diseases and disorders of the female reproductive system.
    c. Discuss the procedures of a breast exam.
    d. Perform breast exam on model in lab.
31. Interpret the basic structures and functions of the male reproductive system.
    a. Identify major structures and functions of the male reproductive system.
    b. Discuss diseases and disorders of the male reproductive system.
    c. Discuss procedures of a testicular exam.
    d. Perform testicular exam on model in lab.
32. Interpret the basic structures of the endocrine system.
    a. Define key terms related to the endocrine system.
    b. Label structures of the endocrine system.
33. Interpret the basic functions of the endocrine system.
    a. Analyze the actions of hormones on various body functions.
    b. Recognize diseases and disorders of the endocrine system.
34. Review facility policies related to Allied Health II.
    a. Discuss responsibilities of clinical rotation.
    b. Discuss school district policies.
35. Explain procedures related to infection control.
    a. Demonstrate a sterile procedure maintaining a sterile field.
    b. Describe basic techniques to prepare, wrap, and sterilize instruments.
    c. Observe a surgical scrub.
    d. Discuss repair of medical equipment by biomedical personnel.

36. Discuss stages of growth and development.
    a. Review the reproductive system.
    b. Identify physical, mental, emotional, and social development characteristics of each of Erikson's stages of development from infancy through late adulthood.
    c. Identify Maslow's Hierarchy of Human Needs.
    d. Discuss cultural practices that affect needs.
37. Explain concepts related to death and dying.
    a. Describe the five stages of grief.
    b. Discuss hospice care.
    c. Define living will, advance directives, and organ donation.
38. Demonstrate job seeking skills.
    a. Prepare a resume containing essential information utilizing word processing software.
    b. Complete a job application form on paper or online.
    c. Discuss procedures for job interviews.
    d. Demonstrate the role of an applicant in a job interview.
    e. Describe job interview etiquette.
39. Explain job keeping skills.
    a. Discuss positive relations with clients and peers.
    b. Write a letter of resignation.

Appendix A: Standards Based on the Core Curriculum for Surgical Technology[1]

SGT1 Basic science
SGT2 Related science
SGT3 Biomedical science
SGT4 Patient care concepts
SGT5 Nonsterile responsibilities
SGT6 Sterile responsibilities
SGT7 Surgical interventions
SGT8 Professional management
SGT9 Self management
SGT10 Workplace management

[1] *Core curriculum for surgical technology* (5th ed.). (2002). Centennial, CO: Association of Surgical Technologists.

Appendix B: Related Academic Standards[2]

Reading
R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare/contrast, cause/effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)

Mathematics Computation
M1 Addition of Whole Numbers (no regrouping, regrouping)
M2 Subtraction of Whole Numbers (no regrouping, regrouping)
M3 Multiplication of Whole Numbers (no regrouping, regrouping)
M4 Division of Whole Numbers (no remainder, remainder)
M5 Decimals (addition, subtraction, multiplication, division)
M6 Fractions (addition, subtraction, multiplication, division)
M7 Integers (addition, subtraction, multiplication, division)
M8 Percents
M9 Algebraic Operations

Applied Mathematics
A1 Numeration (ordering, place value, scientific notation)
A2 Number Theory (ratio, proportion)
A3 Data Interpretation (graph, table, chart, diagram)
A4 Pre-Algebra and Algebra (equations, inequality)
A5 Measurement (money, time, temperature, length, area, volume)
A6 Geometry (angles, Pythagorean theory)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
A8 Estimation (rounding, estimation)

Language
L1 Usage (pronoun, tense, subject/verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)

Spelling
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

[2] CTB/McGraw-Hill LLC. (1994). *Tests of adult basic education, Forms 7 and 8.* Monterey, CA: Author.

Appendix C: Workplace Skills for the 21st Century[3]

WP1 Allocates resources (time, money, materials and facilities, and human resources).

WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.

WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.

WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.

WP5 Selects, applies, and maintains/troubleshoots technology.

WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.

WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.

WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

[3] *Secretary's commission on achieving necessary skills*. (1991). Retrieved July 13, 2004, from http://wdr.doleta.gov/SCANS/

Appendix D: National Educational Technology Standards for Students[4]

T1 Basic operations and concepts
- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

T2 Social, ethical, and human issues
- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

T3 Technology productivity tools
- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

T4 Technology communications tools
- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

T5 Technology research tools
- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

T6 Technology problem-solving and decision-making tools
- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

[4] International Society for Technology in Education. (2000). *National educational technology standards for students (NETS).* Retrieved July 13, 2004, from http://www.iste.org/