

Surgical Techniques

Crosswalk to AST Core Curriculum

This crosswalk aligns the MAVCC module objectives for *Surgical Techniques* to the content outlines in AST's *Core Curriculum for Surgical Technology*. If a blank appears under the "MAVCC Module Objectives" column, then the area is not covered in the MAVCC curriculum. The instructor should use supplemental resources to teach these areas.

AST Course Outline	MAVCC Module Objective
BIOPSYCHOSOCIAL NEEDS OF THE PATIENT	
I. Biological needs A. Nutrition B. Sleep C. Regulation of body processes D. Fluid balance E. O₂/CO₂ exchange F. Elimination of waste	Module 2-B: Objective 3—Select true statements concerning the three primary areas that must be addressed when caring for patients with complex needs
II. Psychological needs A. Fear 1. Unknown 2. Shortened lifespan 3. Anesthesia 4. Death 5. Pain 6. Disfigurement/mutilation 7. Loss of self control	Module 2-B: Objective 3—Select true statements concerning the three primary areas that must be addressed when caring for patients with complex needs
B. Loss of Security 1. Financial 2. Employment	Module 2-B: Objective 3—Select true statements concerning the three primary areas that must be addressed when caring for patients with complex needs
C. Family issues 1. Incompetent personnel 2. Individualism a. Self-image b. Life roles	Module 2-B: Objective 3—Select true statements concerning the three primary areas that must be addressed when caring for patients with complex needs; Objective 20—Explain the three phases of secondary trauma the family and surgical team may experience when caring for or at the death of a chronic or terminal patient
III. Social needs	Module 2-B: Objective 3—Select true statements concerning the three primary areas that must be addressed when caring for patients with complex needs; Objective 6—Select true statements concerning how to approach the psychosocial aspects of caring for special needs patients

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<p>IV. Spiritual needs</p> <ul style="list-style-type: none"> A. Supporting religious beliefs B. Recognize religious faith C. Visiting with clergy D. Right to refuse treatment 	<p>Module 2-B: Objective 1—Select true statements concerning characteristics of patients with special or complex needs; Objective 2—Describe the nine characteristics that qualify a patient as having special or complex needs; Objective 3—Select true statements concerning the three primary areas that must be addressed when caring for patients with complex needs; Objective 8—List general spiritual considerations for those caring for special needs patients; Objective 16—Select the proper care for patients with special language, cultural, and religious needs; Assignment Sheet 1—Complete complex needs case studies</p>
<p>V. Cultural needs</p>	<p>Module 2-B: Objective 1—Select true statements concerning characteristics of patients with special or complex needs; Objective 2—Describe the nine characteristics that qualify a patient as having special or complex needs; Objective 6—Select true statements concerning how to approach the psychosocial aspects of caring for special needs patients; Objective 16—Select the proper care for patients with special language, cultural, and religious needs; Assignment Sheet 1—Complete complex needs case studies</p>
<p>VI. Other Considerations</p> <ul style="list-style-type: none"> A. Pediatrics <ul style="list-style-type: none"> 1. Development level/stages 2. Biological differences 	<p>Module 2-B: Objective 2—Describe the nine characteristics that qualify a patient as having special or complex needs; Assignment Sheet 1—Complete complex needs case studies</p>
<ul style="list-style-type: none"> B. Geriatrics <ul style="list-style-type: none"> 1. Developmental level/stages 2. Biological differences 	<p>Module 2-B: Objective 2—Describe the nine characteristics that qualify a patient as having special or complex needs; Objective 15—Complete statements concerning care of aging patients; Assignment Sheet 1—Complete complex needs case studies</p>
<p>VII. Immunocompromised patient</p>	<p>Module 2-B: Objective 2—Describe the nine characteristics that qualify a patient as having special or complex needs</p>
<p>VIII. Other special patient populations</p>	<p>Module 2-B: Objective 2—Describe the nine characteristics that qualify a patient as having special or complex needs; Objective 9—Complete statements concerning care of patients who are physically challenged; Objective 10—Complete statements concerning care of patients with emotional/mental impairments; Objective 12—Select true statements concerning care of patients with hematological disorders; Objective 13—List three approaches in caring for patients with sexually-related disorders or procedures; Objective 14—Select true statements concerning care of patients with aseptically critical conditions; Objective 17—Distinguish between acute and chronic illnesses</p>

PREOPERATIVE ROUTINES

<p>I. Patient physical preparation</p> <p>A. Hair removal</p> <ol style="list-style-type: none"> 1. Depilatory 2. Razor 3. Clipper <p>B. Pre-shower</p> <ol style="list-style-type: none"> 1. Antiseptic wash <p>C. Enema</p> <p>D. Medications</p>	<p>Module 3-B: Objective 5—List the purposes of a surgical skin prep; Objective 6—Select true statements concerning patient preparation for a surgical procedure; Objective 7—Match types of antiseptic agents used for surgical skin preps with the correct descriptions</p>
<p>II. Patient checklist</p> <p>A. NPO</p> <p>B. Nail polish removal</p> <p>C. Dentures</p> <p>D. Voiding/catheter</p> <p>E. Jewelry removal</p> <p>F. Baseline vital signs</p> <p>G. Attire</p>	<p>Module 1-B: Objective 3—Complete statements concerning preadmission procedures performed before surgery; Objective 7—Complete statements concerning preoperative nursing staff responsibilities the morning of surgery; Assignment Sheet 1—Complete preoperative checklist and operative consent form</p>

PATIENT IDENTIFICATION

<p>I. Patient Identification</p> <p>A. Purposes</p> <ol style="list-style-type: none"> 1. Correct patient 2. Correct surgeon 3. Correct procedure 4. Correct location 	<p>Module 1-B: Objective 4—State the purposes of an operative consent form; Objective 6—Select true statements concerning prerequisites for signing an informed surgical consent form; Assignment Sheet 1—Complete preoperative checklist and operative consent form</p>
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<p>B. Process</p> <ol style="list-style-type: none"> 1. Introduce self to patient 2. Read patient ID band 3. Compare patient ID band/patient chart with surgery schedule 4. Request patient to verbally state name and pertinent information (if possible) <ol style="list-style-type: none"> a. Name b. Allergies <ol style="list-style-type: none"> (1) Food (2) Medications (3) Other c. Procedure side/site d. Surgeon 5. Report discrepancies 	<p>Module 1-B: Objective 7—Complete statements concerning preoperative nursing staff responsibilities the morning of surgery; Objective 11—List responsibilities of the circulator when admitting the patient to the preoperative holding area; Assignment Sheet 1—Complete preoperative checklist and operative consent form</p>
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TRANSPORTATION

<p>I. Transportation</p> <p>A. Methods</p> <ol style="list-style-type: none"> 1. Stretcher/cart/gurney 2. Bed 3. Wheelchair 4. Crib/isolette 5. Ambulation 	<p>Module 1-B: Objective 8—Match methods for transporting a patient with their correct descriptions</p>
<p>B. Safety features</p> <ol style="list-style-type: none"> 1. Side rails 2. Safety strap 3. Wheel locks 4. Intravenous (IV) stand/pole 	<p>Module 1-B: Objective 9—Identify the safety features of a standard stretcher</p>
<p>C. Patient safety principles</p> <ol style="list-style-type: none"> 1. Traction apparatus 2. Drainage collection devices 3. Ventilator 4. Feet first 5. Slowly and in full control 6. Protect patient dignity 7. Patient self-protection 	<p>Module 1-B: Objective 10—Complete statements concerning safety procedures for transporting a patient on a stretcher; Job Sheet 2—Transport patient from room to OR</p>

REVIEW OF THE CHART

<p>I. Review of the chart</p> <p>A. Laboratory values</p> <ol style="list-style-type: none"> 1. Complete blood count (CBC) 2. Urinalysis (UA) 3. Blood chemistry 4. Prothrombin time/partial thromboplastin time (PT/PTT) 5. Type and crossmatch 6. Drug toxicology/screening 7. Patient-specific <p>B. Other diagnostic tests</p> <ol style="list-style-type: none"> 1. Electrocardiogram (ECG) 2. Radiology <p>C. Diagnostic interventions</p>	<p>Module 1-B: Objective 2— Select true statements concerning preadmission to the health care facility</p>
<p>D. Other documentation</p> <ol style="list-style-type: none"> 1. Consent 2. Pre-operative checklist 3. Allergies <ol style="list-style-type: none"> a. Medications b. Foods c. Latex 4. History and physical 	<p>Module 1-B: Objective 5— Match types of consents with their correct definitions</p>

CONSENT

<p>I. Purpose</p> <p>A. Protection of patient</p> <p>B. Protection of hospital/facility/personnel</p> <p>C. Protection of physician</p>	<p>Module 1-B: Objective 4—State the purposes of an operative consent form</p>
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<p>II. Types</p> <ul style="list-style-type: none">A. MedicalB. Surgical<ul style="list-style-type: none">1. Operative procedure/examination2. Anesthesia administration3. Sterilization consentC. Specific<ul style="list-style-type: none">1. Investigation device2. Specimen/limb disposal	<p>Module 1-B: Objective 5— Match types of consents with their correct definitions</p>
<p>III. Informed consent</p> <ul style="list-style-type: none">A. Understandable languageB. No coercion/intimidationC. Proposed surgical procedure or treatmentD. Potential complicationsE. Potential risksF. Alternative therapies and relative risks	<p>Module 1-B: Objective 6—Select true statements concerning prerequisites for signing an informed surgical consent form</p>
<p>IV. Contents of consent form</p> <ul style="list-style-type: none">A. Patient nameB. Physician nameC. Procedure to be performed<ul style="list-style-type: none">1. Medical terminology2. Lay terminologyD. Legal signatureE. Witness signatureF. Date/time of signatures	<p>Module 1-B: Objective 6—Select true statements concerning prerequisites for signing an informed surgical consent form; Assignment Sheet 1—Complete preoperative checklist and operative consent form</p>

<p>V. Legal guidelines</p> <p>A. Legal age of consent</p> <ol style="list-style-type: none"> 1. Of legal age 2. Emancipated minor 3. Previous child-bearing status <p>B. Legally competent</p> <p>C. Mentally competent</p> <p>D. Special concerns</p> <ol style="list-style-type: none"> 1. Illiteracy 2. Sensory impairment 3. Court order 4. Emergency consent 5. Alternate methods of obtaining consent <ol style="list-style-type: none"> a. Telephone b. Telegram c. Consulting physicians d. Administrative e. Emergent situations f. Life threatening circumstances g. Minor without legal guardian 	<p>Module 1-B: Objective 6—Select true statements concerning prerequisites for signing an informed surgical consent form</p>
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TRANSFER

<p>I. Transfer</p> <p>A. Methods</p> <ol style="list-style-type: none"> 1. Self transfer 2. Assisted four-person transfer 	<p>Module 1-B: Job Sheet 3—Transfer patient from stretcher to OR table</p>
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<p>B. Equipment</p> <ol style="list-style-type: none"> 1. Transfer devices <ol style="list-style-type: none"> a. Slider board b. Roller board c. Backboard 2. Safety strap 	<p>Module 1-B: Job Sheet 4—Transfer patient from OR table to recovery stretcher</p>
<p>C. Principles</p> <ol style="list-style-type: none"> 1. Body mechanics 2. Patient dignity 3. Patient safety 	<p><i>Introduction to Surgical Technology</i>, Module 3-E: Applied Physics</p> <p>Module 1-B: Objective 10—Complete statements concerning safety procedures for transporting a patient on a stretcher</p>

ANESTHESIA CONCEPTS

<p>I. Assessment</p> <ol style="list-style-type: none"> A. ASA determination B. Choice of anesthesia administration 	<p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia</p>
<p>II. Attaching monitoring devices</p> <ol style="list-style-type: none"> A. Electrocardiogram (ECG) B. Pulse oximeter C. Blood pressure cuff D. Bispectral index monitor (BIS) E. Temperature monitor F. Other <ol style="list-style-type: none"> 1. Central venous pressure (CVP) 2. Swan-Ganz line 3. Arterial line 	<p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia, Objective 27—Match OR anesthesia equipment used for delivering anesthetics and/or monitoring the patient with their correct descriptions</p>
<p>III. Positioning for induction</p> <ol style="list-style-type: none"> A. Supine <ol style="list-style-type: none"> 1. OR table 2. Stretcher B. Lateral C. Sitting 	<p>Module 3-B: Objective 2—Complete statements related to patient positioning guidelines; Objective 3—Identify the basic surgical positions and their variations; Objective 4—Match equipment and supplies used in positioning with their proper uses</p> <p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia, Objective 13—Match types of local or regional anesthetics with their correct descriptions</p>

<p>IV. Thermoregulatory devices A. Hyper/hypothermia blanket B. Warmed air device</p>	<p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia, Objective 28—Match equipment used as adjuncts to anesthesia with their uses</p>
<p>V. Intravenous access A. Peripheral B. Central</p>	<p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia, Objective 9—Distinguish between methods of administering a general anesthetic</p>

POSITIONING

<p>I. Factors A. Anesthesia types B. Surgeon’s preference C. Patient considerations D. Physiological and anatomical consideration E. Safety F. Procedure/incision site</p>	<p>Module 3-B: Objective 2—Complete statements related to patient positioning guidelines</p>
<p>II. OR Table A. Function B. Accessories C. Additional supplies</p>	<p>Module 3-B: Objective 4—Match equipment and supplies used in positioning with their proper uses</p>
<p>III. Positions A. Supine (dorsal recumbent) 1. Trendelenburg 2. Reverse Trendelenburg 3. Fowler’s/Semi-Fowler’s 4. Lithotomy</p>	<p>Module 3-B: Objective 3—Identify the basic surgical positions and their variations; Job Sheet 1—Position patient in the supine position and its variations</p>

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<p>B. Lateral</p> <ol style="list-style-type: none"> 1. Kidney 2. Sims' 	<p>Module 3-B: Objective 3—Identify the basic surgical positions and their variations; Job Sheet 3—Position patient in the lateral position and its variations</p>
<p>C. Prone</p> <ol style="list-style-type: none"> 1. Kraske/jackknife 2. Knee-chest 	<p>Module 3-B: Objective 3—Identify the basic surgical positions and their variations; Job Sheet 2—Position patient in the prone position and its variations</p>
<p>D. Miscellaneous</p> <ol style="list-style-type: none"> 1. Fracture table 	<p>Module 3-B: Objective 3—Identify the basic surgical positions and their variations</p>

URINARY CATHETERIZATION

Most of these competencies will be covered in *Surgical Procedures*, Module 3-C: Genitourinary.

<p>I. Indications</p> <ol style="list-style-type: none"> A. Specimen collection B. Urine retention C. Decompression of the bladder D. Monitor output E. Incontinence F. Other 	
<p>II. Considerations</p> <ol style="list-style-type: none"> A. Physician's order B. Male/female anatomy C. Positioning and lighting D. Patient modesty E. Sterile technique 	

<p>III. Supplies</p> <ul style="list-style-type: none"> A. Catheter set/tray B. Catheter <ul style="list-style-type: none"> 1. Non-retaining 2. Retaining C. Urine collection devices D. Other 	<p>Module 6-C: Objective 4—Identify common types of urethral catheters and urinary collection devices</p>
<p>IV. Procedural steps</p>	
<p>V. Monitoring urine output</p> <ul style="list-style-type: none"> A. Measurement B. Assessment C. Documentation 	

SKIN PREPARATION

<p>I. Concepts</p> <ul style="list-style-type: none"> A. Purpose B. Mechanical cleansing/bathing/showering C. Hair removal <ul style="list-style-type: none"> 1. Orders 2. Timing 3. Area 4. Techniques <ul style="list-style-type: none"> a. Shaving b. Clippers c. Depilatory cream 	<p>Module 3-B: Objective 5—List the purposes of a surgical skin prep</p> <p>Objective 6—Select true statements concerning patient preparation for a surgical procedure</p>
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<p>II. Skin prep</p> <ul style="list-style-type: none">A. Mechanical cleaningB. PressureC. Friction<ul style="list-style-type: none">1. Chemical antiseptics2. SuppliesD. Basins for antiseptic soap and/or solutionE. Applicators<ul style="list-style-type: none">1. Gauze2. Sponges3. Cotton tip swab4. Other applicatorsF. Towels for dryingG. Sterile glovesH. Pads to collect excess prep solution	<p>Module 3-B: Objective 8—Complete statements concerning common surgical sites to be prepped; Assignment Sheet 2—Define the limits for surgical skin preps on various surgeries</p>
<p>I. Solutions</p> <ul style="list-style-type: none">1. Chlorhexidine gluconate2. Iodine and iodophors3. Alcohol (Isopropyl 70%)4. Hexachlorophane	<p>Module 3-B: Objective 7—Match types of antiseptic agents used for surgical skin preps with their correct descriptions</p>

<p>J. Procedure</p> <ol style="list-style-type: none"> 1. Assemble necessary equipment 2. Establish a sterile field 3. Prepare solutions 4. Expose the site to be prepped 5. Provide adequate lighting 6. Place protective pads/drapes 7. Don sterile gloves 8. Wet the applicator with scrub solution 9. Scrub the skin <ol style="list-style-type: none"> a. Circular motion b. Start at the incision point and working toward the periphery c. Discard the sponge after reaching the periphery and obtain a new one to continue d. Scrub for a minimum of five minutes or according to hospital policy 10. Dry the area 11. Apply paint solution <ol style="list-style-type: none"> a. Use gauze on sponge sticks b. Work from the incision line outward toward the periphery 12. Considerations <ol style="list-style-type: none"> a. The umbilicus is considered contaminated b. Stomas, skin ulcers, sinuses and open wounds are considered contaminated c. Areas of high microbial counts (axilla, groin, hair line, etc) are considered contaminated and are prepped last with each sponge d. Perineal preps e. Skin grafts (donor and recipient sites) f. Eyes <ol style="list-style-type: none"> (1) Eyebrows—never shaved (2) Eyelashes (3) Orbit 13. Documentation <ol style="list-style-type: none"> a. Skin condition b. Hair removal technique c. Prep solutions d. Person performing the prep 	<p>Module 3-B: Objective 6—Select true statements concerning patient preparation for a surgical procedure; Job Sheet 4—Prep patient’s skin for abdominal surgery; Job Sheet 5—Prep patient’s skin for surgery on an extremity</p>
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ATTIRE

<p>I. Basic OR attire</p> <ol style="list-style-type: none"> A. Scrubs B. Hat C. Shoes/covers D. Warm-up jacket E. Mask 	<p>Module 1-A: Objective 6—List the components of basic OR attire required in the semi-restricted and restricted areas of an OR suite; Assignment Sheet 2—Investigate policies and procedures concerning OR attire for a specific medical facility</p>
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<p>II. Accessory attire</p> <ul style="list-style-type: none">A. Lab coatB. Personal protective equipment<ul style="list-style-type: none">1. Face protection2. Eye protection3. Other protection	<p>Module 1-A: Objective 6—List the components of basic OR attire required in the semi-restricted and restricted areas of an OR suite</p>
<p>III. Handwashing</p>	<p>Module 1-A: Job Sheet 1—Perform a two- to three-minute medical handwash</p>
<p>IV. Restrictions</p> <ul style="list-style-type: none">A. No jewelryB. No nail polish/artificial nailsC. Full coverage of head/facial hair, except eyebrows/eyelashes	<p>Module 1-A: Student Supplement 2—Desirable traits and special demands of the surgical technologist; Student Supplement 3—Ways to promote professionalism; Assignment Sheet 1—Evaluate your personal health and hygiene</p>

CASE SELECTION

<p>I. Information</p> <ul style="list-style-type: none">A. Surgery scheduleB. Surgeon's preference card	<p>Module 7-C: Objective 5—Describe organizational strategies for setting up the sterile field</p>
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<p>II. Selection</p> <p>A. Instrumentation</p> <p>B. Supplies</p> <ol style="list-style-type: none"> 1. Sterile 2. Nonsterile <p>C. Equipment</p> <ol style="list-style-type: none"> 1. Sterile 2. Nonsterile 	<p>Module 7-C: Job Sheet 7—Perform perioperative surgical technologist’s duties</p>
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EQUIPMENT

<p>I. Specialty equipment</p> <p>A. Lasers</p> <p>B. Harmonic scalpel</p> <p>C. Argon-beam coagulator</p> <p>D. Microscope</p> <p>E. CUSA</p> <p>F. Video/monitor/recorder/camera</p> <p>G. Fiberoptic headlight</p> <p>H. Light sources</p> <p>I. Insufflator</p> <p>J. Dermatomes</p> <p>K. Irrigation/aspiration unit</p> <p>L. Cryotherapy unit</p> <p>M. Nerve stimulator</p> <p>N. Cell saver</p> <p>O. Robotic arm</p>	<p>Module 2-C: Objective 6—Match surgical specialty equipment to their functions</p> <p>Module 2-C: Objective 5—Complete statements concerning equipment required to perform minimally invasive endoscopic surgery</p> <p>Module 2-C: Objective 6—Match surgical specialty equipment to their functions</p> <p>Module 2-C: Objective 4—Match basic OR furniture and equipment typical to each OR to their functions</p> <p>Module 2-C: Objective 5—Complete statements concerning equipment required to perform minimally invasive endoscopic surgery</p> <p>Module 2-C: Objective 6—Match surgical specialty equipment to their functions</p>
<p>II. Accessory equipment</p> <p>A. Suction systems</p> <p>B. Lights</p> <p>C. Electrosurgical equipment</p> <p>D. Sequential compression devices</p> <p>E. Thermoregulatory devices</p> <p>F. Tourniquets</p>	<p>Module 2-C: Objective 4—Match basic OR furniture and equipment typical to each OR to their functions</p> <p>Module 3-B: Objective 4—Match equipment and supplies used in positioning with their proper uses</p> <p>Module 2-C: Objective 6—Match surgical specialty equipment to their functions</p>

INSTRUMENTATION

<p>I. Instruments A. Classifications</p> <ol style="list-style-type: none"> 1. Cutting/dissecting 2. Grasping/holding 3. Clamping/occluding 4. Retracting/exposing 5. Probing 6. Suturing 7. Viewing 8. Dilating 9. Aspirating 10. Accessory 	<p>Module 3-C: Objective 3—Select true statements concerning functional classifications of surgical instruments; Assignment Sheet 1—Classify basic surgical instruments according to their functions; Assignment Sheet 2— Determine appropriate instrumentation for case study</p> <p>Module 3-C: Objective 4—Identify basic cutting/ dissecting instruments</p> <p>Module 3-C: Objective 6—Identify basic grasping/ holding instruments</p> <p>Module 3-C: Objective 5—Identify basic clamping/ occluding instruments</p> <p>Module 3-C: Objective 7—Identify basic retracting/ exposing instruments</p> <p>Module 3-C: Objective 9—Identify dilating/probing instruments</p> <p>Module 3-C: Objective 8—Identify needle holders</p> <p>Module 3-C: Objective 10—Identify basic visualization instruments</p> <p>Module 3-C: Objective 9—Identify dilating/probing instruments</p> <p>Module 3-C: Objective 10—Identify basic visualization instruments</p>
<p>B. Parts</p> <ol style="list-style-type: none"> 1. Tip 2. Jaw 3. Box lock 4. Shank 5. Ratchet 6. Finger rings 	<p>Module 3-C: Objective 1—Identify the parts of a standard surgical instrument</p>

<p>C. Materials</p> <ol style="list-style-type: none"> 1. Stainless steel 2. Titanium 3. Alloys 	<p>Module 3-C: Objective 2—Match the composition of a surgical instrument to its proper description and function</p>
<p>D. Finishes</p> <ol style="list-style-type: none"> 1. Bright, mirror 2. Satin, dulled 3. Ebonized 	<p>Module 3-C: Objective 2—Match the composition of a surgical instrument to its proper description and function</p>
<p>II. Care and handling</p> <p>A. Intraoperative</p> <ol style="list-style-type: none"> 1. Passing techniques 2. Safety precautions 	<p>Module 3-C: Job Sheet 1—Load and unload a scalpel blade on a scalpel handle; Job Sheet 2—Pass a loaded scalpel to another person</p> <p>Module 3-C: Job Sheet 3—Pass various instruments to another person; Job Sheet 4—Assemble a Bookwalter self-retaining retractor</p>
<p>B. Prior to reuse</p> <ol style="list-style-type: none"> 1. Cleansing method <ol style="list-style-type: none"> a. Washer/sterilizer b. Ultrasonic cleaner c. Terminal sterilization 2. Lubrication 3. Preparation for sterilization <ol style="list-style-type: none"> a. Check function and integrity b. Set assembly 	<p>Module 3-A: Objective 4—Match surgical supply preparation phases with their proper descriptions; Objective 5—Select true statements concerning handling contaminated instruments during and after a surgical procedure; Objective 6—Complete statements concerning decontamination methods used for cleaning instruments; Objective 7—Identify the methods of packaging items for sterilization; Objective 8—Select from a list the recommended characteristics for packaging materials; Objective 9—Select true statements that accurately describe the preparation phase for packaging; Objective 10—Complete statements concerning guidelines for packing and loading instruments for sterilization</p>

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ROOM PREPARATION

<p>I. Preparation of the environment</p> <p>A. Furniture</p> <ol style="list-style-type: none"> 1. Mayo stand 2. Back table 3. Ring stand <ol style="list-style-type: none"> a. Single b. Double 4. Prep table 5. OR table and accessories 6. Kick bucket 7. Sitting stool 8. Standing/step stool 9. Linen hamper 10. Trash receptacle 11. Biohazardous waste receptacle 	<p>Module 2-C: Objective 4—Match basic OR furniture and equipment typical to each OR to their functions</p>
<p>II. Supplies</p> <p>A. Sterile packs</p> <ol style="list-style-type: none"> 1. Drape packs 2. Custom packs 	<p>Module 1-A: Student Supplement 5—General Handling and Movement Guidelines for OR; Job Sheet 3—Open a sterile pack on a back table; Job Sheet 4—Open a sterile peel-pack; Job Sheet 5—Open a sterile cloth- or paper-wrapped package</p>
<p>B. Surgical sponges</p> <ol style="list-style-type: none"> 1. Types 2. Uses 	<p>Module 5-C: Objective 2—Distinguish between the types and characteristics of commonly used surgical sponges</p>
<p>C. Dressings</p> <ol style="list-style-type: none"> 1. Types 2. Uses 	<p>Module 5-C: Objective 3—Select true statements concerning uses of surgical dressings; Objective 6—Complete statements concerning specialty dressings; Objective 7—Complete statements concerning the application of a sterile dressing</p>
<p>D. Catheters, drains, tubes, collection devices</p> <ol style="list-style-type: none"> 1. Types 2. Uses 3. Applications 	<p>Module 6-C: Objective 2—Distinguish among uses for catheters, drains, and tubes; Objective 4—Identify common types of urethral catheters and urinary collection devices; Objective 6—Match types of wound drains with their correct uses; Objective 7—Complete statements concerning airway tubes used in OR; Objective 8—Complete statements concerning chest drains or chest tubes used in OR and their uses; Objective 9—Select true statements concerning chest drain components; Objective 10—Match types of gastrointestinal tubes used in OR with their correct uses</p>
<p>E. Accessory Supplies</p> <ol style="list-style-type: none"> 1. Syringes and irrigators 2. Hypodermic and spinal needles 3. Basins and containers 	<p><i>Introduction to Surgical Technology</i>, Module 3-D: Syringes and Hypodermic Needles</p>

<p>III. Preliminary preparations</p> <p>A. Gather instruments, supplies, and equipment for case</p> <ol style="list-style-type: none"> 1. Surgery schedule 2. Surgeon’s preference card 	<p>Module 1-C: Objective 1—Select job responsibilities of the surgical technologist during the pre-operative phase prior to surgery; Objective 4—Select job responsibilities of the circulator during the pre-operative phase prior to surgery</p> <p>Module 7-C: Job Sheet 7—Perform perioperative surgical technologist’s duties; Job Sheet 8—Perform perioperative circulator’s duties</p>
<p>B. OR preparation</p> <ol style="list-style-type: none"> 1. Arrange furniture 2. Gather positioning devices 3. Damp-dust lights, furniture and surfaces 4. Verify functionality of equipment 5. Place items to be opened in appropriate locations 	<p>Module 3-A: Objective 27—Describe cleaning the operating room prior to the first surgical procedure of the day</p>
<p>IV. Opening sterile supplies</p> <p>A. Verify exposure to sterilization process and integrity of barrier material</p> <p>B. Use sterile technique</p> <p>C. Open as close to the time of surgery as possible</p> <p>D. Open back table pack, gown and gloves, basin set and instruments in appropriate locations</p> <p>E. Open additional supplies onto the sterile field</p>	<p>Module 1-A: Job Sheet 3—Open a sterile pack on a back table; Job Sheet 4—Open a sterile peel-pack; Job Sheet 5—Open a sterile cloth- or paper-wrapped package; Job Sheet 6—Open a sterile basin on a ringstand; Job Sheet 7—Pour a sterile solution</p>

ASEPSIS AND STERILE TECHNIQUE

<p>I. Principles of asepsis</p> <p>A. A sterile field is created for each surgical procedure</p> <p>B. Sterile team members must be appropriately attired prior to entering the sterile field</p> <p>C. Movement in and around the sterile field must not compromise the field</p>	<p>Module 1-A: Objective 7—Complete statements that describe the basic principles of asepsis</p>
<p>II. Practice of sterile technique</p> <p>A. All materials in contact with the wound and used within the sterile field must be sterile</p>	<p>Module 1-A: Student Supplement 1—Aseptic technique; Student Supplement 4—General movement guidelines for OR personnel; Student Supplement 5—General handling and movement guidelines for OR materials</p>
<p>B. Gown sterility</p> <ol style="list-style-type: none"> 1. In front from midchest to table level 2. Sleeves - proximal cuff to 2” above the elbow <p>C. Only the top surface of the draped table is sterile</p>	<p>Module 1-A: Objective 7—Complete statements that describe the basic principles of asepsis</p>

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<p>D. Packages</p> <ol style="list-style-type: none">1. After a sterile package or container is opened, the edges are considered nonsterile2. 4-way folded packages - 1" margin or edge of horizontal surface3. Paper/plastic packages - width of the seal	<p>Module 1-A: Objective 7—Complete statements that describe the basic principles of asepsis; Student Supplement 5—General handling and movement guidelines for OR materials</p>
<p>E. Caps should not be replaced on bottles</p>	<p>Module 1-A: Student Supplement 5—General handling and movement guidelines for OR materials</p>
<p>F. Sterile items and personnel touch only sterile items; conversely, nonsterile items and personnel touch only nonsterile items</p> <ol style="list-style-type: none">1. Sterile above - nonsterile below2. Do NOT reach over the sterile field3. Opening/draping<ol style="list-style-type: none">a. Circulator - away firstb. Scrub - toward first <p>G. Sterile team members stay close to the field</p>	<p>Module 1-A: Objective 7—Complete statements that describe the basic principles of asepsis; Student Supplement 4—General movement guidelines for OR personnel</p>
<p>H. Personnel do NOT walk between sterile fields</p> <ol style="list-style-type: none">1. Face to face, back to back transfers for sterile personnel2. Nonsterile personnel face the sterile field when passing, maintaining a safe distance <p>I. Talking/movement is kept to a minimum</p>	<p>Module 1-A: Student Supplement 4—General movement guidelines for OR personnel</p>
<p>J. Whenever a sterile barrier is permeated, it is considered contaminated</p> <ol style="list-style-type: none">1. Liquid - strike through2. Holes	<p>Module 1-A: Student Supplement 5—General handling and movement guidelines for OR materials</p>

<p>K. Items of doubtful sterility must be considered nonsterile</p> <ol style="list-style-type: none"> 1. Items that fall on the floor are contaminated 2. Prepare the sterile field as close to use time as possible 3. Do not cover the sterile field 4. Do not leave the sterile field unattended 	<p>Module 1-A: Student Supplement 1—Aseptic technique; Student Supplement 5—General handling and movement guidelines for OR materials</p>
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SCRUBBING

<p>I. Preliminary preparations</p> <ol style="list-style-type: none"> A. Remove jewelry B. Don personal protective equipment C. Inspect integrity of nails and skin 	<p>Module 2-A: Objective 8—Complete statements concerning aseptic guidelines used for a surgical scrub; Job Sheet 1—Perform a mechanical surgical scrub</p>
<p>II. Surgical scrub</p> <ol style="list-style-type: none"> A. Preliminary wash and subungual cleaning B. Antiseptic agents C. Timed method D. Counted brush stroke method 	<p>Module 2-A: Objective 3—Describe processes used to remove microbes from the skin; Objective 5—Describe methods for performing a mechanical surgical scrub; Objective 7—Select true statements concerning mechanical surgical scrub characteristics; Objective 8—Complete statements concerning aseptic guidelines used for a surgical scrub; Job Sheet 2—Perform a brushless surgical hand scrub</p>
<p>E. Considerations</p> <ol style="list-style-type: none"> 1. Scrub from fingertips to elbows 2. Maintain hands/wrists above the level of the elbow 3. Avoid contact with nonsterile surfaces 	<p>Module 2-A: Objective 6—List in sequential order anatomical areas cleaned during a mechanical surgical scrub; Objective 8—Complete statements concerning aseptic guidelines used for a surgical scrub</p>

GOWNING AND GLOVING

<p>I. Gowning</p> <ol style="list-style-type: none"> A. Drying hands and arms 	<p>Module 2-A: Objective 8—Complete statements concerning aseptic guidelines used for a surgical scrub; Job Sheet 3—Dry hands after a surgical scrub</p>
<p>B. Gowning</p> <ol style="list-style-type: none"> 1. Gowning of self 2. Gowning of others 3. Turning the back of gown 	<p>Module 2-A: Objective 10—Complete statements concerning gowning and gloving methods; Objective 13—Complete statements concerning aseptic guidelines used for gowning and gloving</p> <p>Module 2-A: Job Sheet 4—Perform self-gowning technique</p> <p>Module 2-A: Job Sheet 5—Self-glove using the closed technique</p> <p>Module 2-A: Job Sheet 7—Perform assisted-gowning tie and closure</p>

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<p>II. Gloving A. Closed gloving</p> <p>1. Self</p>	<p>Module 2-A: Objective 10—Complete statements concerning gowning and gloving methods; Objective 13—Complete statements concerning aseptic guidelines used for gowning and gloving</p> <p>Module 2-A: Job Sheet 5—Self-glove using the closed technique</p>
<p>B. Open gloving 1. Self - without a gown 2. Others</p>	<p>Module 2-A: Job Sheet 9—Self-glove using the open technique</p>
<p>III. Removal of gown and gloves A. For replacement during the procedure B. At completion of the procedure</p>	<p>Module 2-A: Objective 13—Complete statements concerning aseptic guidelines used for gowning and gloving; Job Sheet 8—Replace contaminated gown and gloves mid-procedure; Job Sheet 10—Remove contaminated gown and gloves</p>

PREPARATION OF THE STERILE FIELD

<p>I. Preparation of instruments and supplies on the sterile field</p> <p>A. Arrange basins, drapes, gowns, gloves and other supplies needed</p> <p>B. Arrange instruments, sponges, sutures, and other supplies on sterile field</p> <p>C. Apply blades to scalpel handles</p> <p>D. Prepare and load appropriate suture materials</p> <p>E. Prepare and label necessary medications and solutions</p> <p>F. Prepare prep table</p>	<p>Module 7-C: Job Sheet 7—Perform perioperative surgical technologist’s duties; Job Sheet 8—Perform perioperative circulator’s duties</p> <p>Module 3-C: Job Sheet 1—Load and unload a scalpel blade on a scalpel handle</p> <p>Module 4-C: Job Sheet 3—Load and pass a needle holder with swaged needle for right- and left-handed surgeons; Job Sheet 4—Load, thread, and pass a needle holder with eyed needle for right- and left-handed surgeons</p> <p>Module 1-A: Job Sheet 7—Pour a sterile solution</p> <p>Module 7-C: Job Sheet 7—Perform perioperative surgical technologist’s duties</p>
<p>II. Drape Mayo stand, furniture, and other equipment as needed</p> <p>A. Arrange instruments and other appropriate items to begin the case on the Mayo stand</p> <p>B. Prepare electro-surgical pencil and suction apparatus</p>	<p>Module 7-C: Job Sheet 1—Drape a Mayo stand; Job Sheet 2—Arrange a basic back table; Job Sheet 3—Arrange a basic Mayo stand; Job Sheet 7—Perform perioperative surgical technologist’s duties; Job Sheet 8—Perform perioperative circulator’s duties</p>
<p>III. Time and motion economy</p> <p>A. Follow functional organizational patterns</p> <p>B. Work rapidly without compromise of the sterile field</p>	<p>Module 7-C: Objective 5—Describe organizational strategies for setting up the sterile field</p>

COUNTS

<p>I. Counting</p> <p>A. Purpose</p>	<p>Module 5-C: Job Sheet 5—Perform a sponge, sharp, and instrument count</p> <p>Module 5-C: Objective 8—List reasons for counts of sponges, sharps, and instruments</p>
<p>B. Legal responsibility</p> <ol style="list-style-type: none"> 1. Documentation 2. Incorrect counts 3. Omitted counts 	<p>Module 5-C: Objective 8—List reasons for counts of sponges, sharps, and instruments; Objective 11—Complete statements concerning the safety rules for achieving accurate counts of sponges, sharps and instruments; Objective 15—Complete statements concerning the required procedure for an incorrect count</p>
<p>II. Concepts</p> <p>A. Technique</p> <ol style="list-style-type: none"> 1. Two-person verification 2. Visual/audible counting 3. Joint counting 4. Field/Mayo/back table/off the field 	<p>Module 5-C: Objective 10—Select true statements concerning when counts are performed; Objective 11—Complete statements concerning the safety rules for achieving accurate counts of sponges, sharps and instruments</p>
<p>B. Timing</p> <ol style="list-style-type: none"> 1. Initial 2. Closure of organ 3. Closure of body cavity 4. Closure of subcutaneous/skin <p>C. Methods</p> <ol style="list-style-type: none"> 1. Sponge 2. Needles/sharps 3. Instruments 4. Accessories 	<p>Module 5-C: Objective 11—Complete statements concerning the safety rules for achieving accurate counts of sponges, sharps and instruments; Objective 12—Complete statements concerning the required procedure for sponge counts; Objective 13—Select true statements concerning the required procedure for sharp counts; Objective 14—Complete statements concerning the required procedure for instrument counts</p>

Crosswalk to AST Core Curriculum

DRAPING

<p>I. Materials</p> <ul style="list-style-type: none">A. WovenB. Non-wovenC. Plastic	<p>Module 7-C: Objective 2—Select true statements concerning composition and characteristics of draping materials</p>
<p>II. Types of drapes</p> <ul style="list-style-type: none">A. TowelsB. FenestratedC. Non-fenestratedD. AdhesiveE. Specialty	<p>Module 7-C: Objective 3—Match types of drapes with their uses</p>
<p>III. Principles of draping</p> <ul style="list-style-type: none">A. CuffingB. HandlingC. Towel placement order	<p>Module 7-C: Objective 4—Complete statements concerning guidelines for draping</p>
<p>IV. Procedural draping</p>	<p>Module 7-C: Objective 4—Complete statements concerning guidelines for draping; Job Sheet 3—Arrange a basic Mayo stand; Job Sheet 4—Drape patient for a laparotomy; Job Sheet 5—Drape patient for vaginal surgery; Job Sheet 6—Drape patient for surgery on an extremity (leg)</p>
<p>V. Draping of equipment</p> <ul style="list-style-type: none">A. MicroscopeB. Phacoemulsification equipmentC. LASERD. X-ray equipmentE. Video equipmentF. Other	<p>Module 7-C: Objective 4—Complete statements concerning guidelines for draping</p>
<p>VI. Draping OR furniture</p> <ul style="list-style-type: none">A. TablesB. Ring standsC. Mayo stand	<p>Module 7-C: Objective 4—Complete statements concerning guidelines for draping; Job Sheet 1—Drape a Mayo stand; Job Sheet 3—Arrange a basic Mayo stand</p>

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<p>II. Hemodynamics</p> <ul style="list-style-type: none"> A. Common measurements B. Mean arterial pressure C. Central venous pressure D. Arterial blood pressure E. Techniques F. Equipment G. Sites H. Principles I. Recording J. Values K. Replacement interventions L. Autotransfusion M. Donated blood products N. Blood volume expanders 	<p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia, Objective 30—Complete statements concerning hemostasis and blood replacement</p>
<p>III. Monitoring</p> <ul style="list-style-type: none"> A. Common measurements B. Electrocardiogram C. Blood gasses D. Other E. Techniques F. Equipment G. Sites H. Principles I. Recording J. Values 	<p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia, Objective 27—Match OR anesthesia equipment used for delivering anesthetics and/or monitoring the patient with their correct descriptions</p>
<p>IV. Thermoregulatory devices</p> <ul style="list-style-type: none"> A. Techniques B. Equipment C. Sites D. Principles E. Recording F. Values 	<p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia, Objective 29—List types of thermoregulatory devices used in the operating room</p>
<p>EMERGENCY PROCEDURES</p>	<p>See <i>Introduction to Surgical Technology</i>, Crosswalk to AST Core Curriculum</p>
<p>SURGICAL WOUND CLASSIFICATION</p>	<p>See <i>Introduction to Surgical Technology</i>, Crosswalk to AST Core Curriculum</p>

MONITORING THE STERILE FIELD

<p>I. Assistant circulating duties</p> <ul style="list-style-type: none"> A. Tie gowns of sterile team members B. Assist in moving furniture into position C. Attach distal ends of suction tubing, electrosurgical active electrode, and other equipment to units D. Observe for breaks in sterile technique E. Monitor the traffic in the operating room during the surgical procedure F. Provide for the needs of sterile team members <ul style="list-style-type: none"> 1. Anticipate needs of surgical team and provide items as needed 2. Perform sponge, needle and instrument counts 	<p>Module 1-C: Objective 4—Select job responsibilities of the circulator during the pre-operative phase prior to surgery; Objective 5—Complete statements that accurately describe the responsibilities of the circulator during the intra-operative phase; Student Supplement 1—Pre-operative duties; Student Supplement 2—Intra-operative duties; Assignment Sheet 1—Differentiate between perioperative roles and responsibilities of the surgical technologist and circulator</p> <p>Module 7-C: Job Sheet 8—Perform perioperative circulator’s duties</p>
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DOCUMENTATION

<p>I. Documentation concepts</p> <ul style="list-style-type: none"> A. Definition 	
<p>B. Documentation of patient care</p> <ul style="list-style-type: none"> 1. Observation of patient responses (routine and individualized) 2. Plan of care 3. Implementation of patient care interventions 4. Outcomes and evaluation 	<p><i>Introduction to Surgical Technology</i>, Module 3-A: Legal and Ethical Responsibilities, Objective 1—Discuss accountability for personal actions and obligations</p>

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<p>II. Documents and forms</p> <p>A. Intraoperative record</p> <p>B. Consent form</p> <ol style="list-style-type: none"> 1. Surgical 2. Anesthesia 3. Sterilization 4. Special procedure 	<p>Module 7-C: Student Supplement 2—Operative record</p> <p>Module 1-B: Objective 5—Match types of consents with their correct definitions</p> <p>Module 1-B: Objective 4—State the purposes of an operative consent form; Objective 5—Match types of consents with their correct definitions; Objective 6—Select true statements concerning prerequisites for signing an informed surgical consent form</p> <p><i>Introduction to Surgical Technology</i>, Module 5-D: Anesthesia</p> <p>Module 1-B: Objective 5—Match types of consents with their correct definitions</p>
<p>C. Incident reports</p> <p>D. Patient charge forms</p> <p>E. Count forms</p> <p>F. Pathology/laboratory forms</p> <p>G. Patient medical record</p> <p>H. Anesthesia record</p> <p>I. Birth/death certificates</p>	<p><i>Introduction to Surgical Technology</i>, Module 2-B: Objective 9—List records that are important to the success of a workplace violence prevention program</p> <p>Module 5-C: Assignment Sheet 1—Complete a count sheet</p> <p>Module 4-B: Assignment Sheet 1—Complete pathology requisition form for specimen</p>
<p>III. Aspects of proper documentation</p> <p>A. Legal standards</p> <p>B. Legal permanent record</p> <p>C. Patient charge forms</p>	
<p>IV. Legal elements of proper documentation</p> <p>A. Recommended practices</p> <ol style="list-style-type: none"> 1. Standard terminology and abbreviations 2. Correct spelling 3. Factual information not personal opinions 4. Legible documentation 5. Correction of errors 6. Legal signature of reporter 7. Completed in a timely manner 	
<p>V. Documentation</p> <p>A. Perioperative documentation</p> <ol style="list-style-type: none"> 1. Patient care information 2. Laboratory results 3. Surgical reports 	<p>Module 1-B: Objective 2—Select true statements concerning preadmission to the health care facility; Module 7-C: Student Supplement 1—Perioperative nursing care record</p>

SPECIMEN CARE

I. Definition of specimen	Module 4-B: Objective 1—List the purposes of specimen collection
II. Methods of obtaining specimen A. Needle aspiration B. Incisional biopsy C. Excisional biopsy	Module 4-B: Objective 4—Complete a table concerning pathologic specimen preparation
III. Specimen handling A. On field 1. Keep moist 2. Careful handling 3. Orientation of specimen (markings) 4. Tiny specimens B. Off field 1. Label properly 2. Proper container 3. Proper solution	Module 4-B: Objective 6—Complete statements concerning proper care and handling of surgical specimens; Objective 7—Select true statements concerning procedures for receiving a pathologic specimen on the sterile field; Objective 8—Complete statements concerning specimen preparation and labeling procedures performed by the circulator Module 4-B: Job Sheet 1—Pass specimen from sterile field to circulator Module 4-B: Job Sheet 2—Receive specimen from sterile field
IV. Containers A. Sterile B. Nonsterile C. Specific	Module 4-B: Objective 8—Complete statements concerning specimen preparation and labeling procedures performed by the circulator
V. Fixation	Module 4-B: Objective 6—Complete statements concerning proper care and handling of surgical specimens

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<p>VI. Specimen labeling</p> <ul style="list-style-type: none">A. Departmental policyB. Date and timeC. Patient's nameD. Patient's hospital numberE. DiagnosisF. SurgeonG. Exact specimen titleH. Precise test requiredI. Appropriate requisitionJ. Logging	<p>Module 4-B: Objective 8—Complete statements concerning specimen preparation and labeling procedures performed by the circulator; Assignment Sheet 1—Complete pathology requisition form for specimen</p>
<p>VII. Specific types of specimens and their care</p> <ul style="list-style-type: none">A. Frozen sectionsB. Fresh specimensC. Permanent sectionsD. StonesE. Body fluids or washingsF. Cytologic smearsG. CulturesH. Amputated limbsI. Embryo/fetusJ. Tissue bankK. Foreign bodiesL. Legal evidence<ul style="list-style-type: none">1. BulletM. Other	<p>Module 4-B: Objective 2—List the types of specimens; Objective 6—Complete statements concerning proper care and handling of surgical specimens</p>
<p>VIII. Specimen storage/transfer</p> <ul style="list-style-type: none">A. Room temperature in departmentB. RefrigeratorC. Direct transfer to labD. Transfer to X-ray	<p>Module 4-B: Objective 8—Complete statements concerning specimen preparation and labeling procedures performed by the circulator; Job Sheet 1—Pass specimen from sterile field to circulator; Job Sheet 2—Receive specimen from sterile field</p>

INTRAOPERATIVE CASE MANAGEMENT

I. Intraoperative techniques**A. Basic routines**

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| 1. Hand signals | Module 3-C: Objective 14—Complete statements concerning the preoperative handling and care of surgical instruments; Job Sheet 3—Pass various instruments to another person |
| 2. Clamp/clamp/cut/tie | Module 3-C: Objective 14—Complete statements concerning the preoperative handling and care of surgical instruments; Module 4-C: Job Sheet 4—Load, thread, and pass a needle holder with eyed needle for right- and left-handed surgeons; Job Sheet 5—Pass ties; Job Sheet 6—Tag and cut sutures |
| 3. Sponge exchange | Module 5-C: Objective 12—Complete statements concerning the required procedure for sponge counts |
| 4. Instrument passing and maintenance | Module 3-C: Objective 14—Complete statements concerning the preoperative handling and care of surgical instruments; Job Sheet 3—Pass various instruments to another person |
| 5. Sharps management | Module 4-C: Objective 14—Complete statements concerning the handling of surgical needles |
| 6. Suture preparation and passing | Module 4-C: Job Sheet 1—Prepare and transfer suture material to sterile field; Job Sheet 2—Straighten sutures; Job Sheet 3—Load and pass a needle holder with swaged needle for right- and left-handed surgeons; Job Sheet 4—Load, thread, and pass a needle holder with eyed needle for right- and left-handed surgeons; Job Sheet 5—Pass ties |
| 7. Medication/irrigation preparation and passing | <i>Introduction to Surgical Technology</i> , Module 4-D: Pharmacologic Agents, Objective 23—Select the statements concerning the care and handling of medications; Objective 24—Complete statements concerning the procedure for the surgical technologist to accept medication from the circulator; Job Sheet 1—Receive medication onto the sterile field |
| 8. Monitoring the sterile field | Module 1-C: Objective 1—Select job responsibilities of the surgical technologist during the pre-operative phase prior to surgery; Objective 2—Complete statements that accurately describe the responsibilities of the surgical technologist during the intra-operative phase; Student Supplement 2—Intra-operative duties |
| 9. Anticipation | Module 1-C: Student Supplement 2—Intra-Operative Duties |
| 10. Specimen management | Module 4-B: Care of Specimens |

HEMOSTASIS

I. Principles A. Blood clotting mechanisms B. Blood components C. Monitoring blood loss	<i>Introduction to Surgical Technology</i> , Module 5-D: Anesthesia, Objective 30—Complete statements concerning hemostasis and blood replacement
II. Methods of hemostasis A. Mechanical <ol style="list-style-type: none"> 1. Hemostatic instruments 2. Ligatures 3. Pressure 4. Bone wax 5. Clip 6. Tourniquet 7. Sponges 8. Pledgets 	<i>Introduction to Surgical Technology</i> , Module 5-D: Anesthesia, Objective 30—Complete statements concerning hemostasis and blood replacement
B. Chemical <ol style="list-style-type: none"> 1. Absorbable gelatin 2. Collagen 3. Oxidized cellulose 4. Silver nitrate 5. Epinephrine 6. Thrombin 	<i>Introduction to Surgical Technology</i> , Module 4-D: Pharmacologic agents, Objective 11—Complete statements concerning the characteristics of hemostatic agents; Module 5-D: Anesthesia, Objective 30—Complete statements concerning hemostasis and blood replacement
C. Thermal <ol style="list-style-type: none"> 1. Electrosurgical unit 2. Harmonic scalpel 3. Argon beam coagulator 4. Laser 	Module 2-C: Objective 6—Match surgical specialty equipment to their functions
III. Techniques A. Hypothermia B. Hypotension	<i>Introduction to Surgical Technology</i> , Module 5-D: Anesthesia, Objective 15—Match other anesthetic techniques occasionally used with their correct descriptions; Objective 24—Complete statements concerning hemolytic reactions

Crosswalk to AST Core Curriculum

EXPOSURE

<p>I. Principles</p> <p>A. Retractors</p> <ol style="list-style-type: none"> 1. Hand-held 2. Self-retaining 3. Protecting underlying tissues 	<p>Module 3-C: Objective 7—Identify basic retracting/exposing instruments</p>
<p>II. Selection of exposure devices</p> <p>A. Tissue application</p> <p>B. Depth of wound</p> <p>C. Size of incision</p>	<p>Module 3-C: Objective 15—Complete statements concerning the interoperative handling and care of surgical instruments</p>
<p>III. Techniques</p> <p>A. Retracting tissue</p> <p>B. Packing bowel</p> <p>C. Wound protector ring</p> <p>D. Bowel bag</p> <p>E. Viscera retainer</p>	<p>Will be covered in <i>Surgical Procedures</i></p>

CATHETERS AND DRAINS

<p>I. Concepts of catheter/wound drainage</p> <p>A. Exit for body fluid</p> <ol style="list-style-type: none"> 1. Intraoperatively 2. Postoperatively <p>B. Introduction/placement</p> <ol style="list-style-type: none"> 1. End of the incision 2. “Stab wound” 3. Natural body orifice 	<p>Module 6-C: Objective 1—Select true statements concerning reasons for introducing and placing items for wound drainage or catheterization; Objective 2—Distinguish among uses for catheters, drains, and tubes; Objective 11—Select true statements concerning placing and securing or anchoring catheters, drains, and tubes</p>
<p>II. Catheters</p> <p>A. Composition</p> <ol style="list-style-type: none"> 1. Latex/rubber 2. PVC 3. Silicone <p>B. Sizes</p> <ol style="list-style-type: none"> 1. French sizing 	<p>Module 6-C: Objective 3—List composition and sizing information for catheters, drains and tubes</p>

C. Application

1. Temporary
2. Indwelling

D. Types

1. Red rubber (Robinson)
 - a. Description
 - b. Uses
 - (1) Irrigation of ducts
 - (2) Temporary drainage of urine from the bladder
2. Indwelling/retention
 - a. Description
 - (1) Foley
 - (a) 2 way
 - (b) 3 way
 - (2) Mushroom/Pezzer/Malecot
 - (3) T-tube
 - b. Components
 - (1) Drainage portal
 - (2) Balloon portal
 - (3) Irrigation portal
 - c. Uses
 - (1) Long-term access or drainage of a hollow organ
 - (2) Irrigation of a hollow organ
 - (3) Drainage of common bile duct (CBD) during healing
 - d. Insertion techniques
 - (1) Urinary catheterization
 - (2) Placement of a mushroom/Pezzer/Malecot catheter
 - (3) T-tube

E. Preparation

1. Testing the retention balloon
2. Lubrication

Module 6-C: Objective 4—Identify common types of urethral catheters and urinary collection devices

Crosswalk to AST Core Curriculum

<p>III. Adapters</p> <p>A. Types</p> <ol style="list-style-type: none">1. Catheter adapters2. Five in one connector <p>B. Uses</p>	<p>Will be covered in <i>Surgical Procedures</i></p>
<p>IV. Collection devices</p> <p>A. Gravity bedside drainage</p> <ol style="list-style-type: none">1. Urinary collection device2. Urometer <p>B. Bile bag</p>	<p>Module 6-C: Objective 4—Identify common types of urethral catheters and urinary collection devices</p>
<p>V. Drains</p> <p>A. Types</p> <ol style="list-style-type: none">1. Open<ol style="list-style-type: none">a. Concepts<ol style="list-style-type: none">(1) Not attached to a closed drainage system(2) Drain by milking fluids along the surface into gauze (capillary action)(3) Have an increased incidence of infectionb. Types<ol style="list-style-type: none">(1) Penrose(2) Cigarette2. Closed<ol style="list-style-type: none">a. Concepts<ol style="list-style-type: none">(1) Drain attached to a closed reservoir for fluid collection(2) Drain by gravity or vacuum(3) Have decreased incidence of infectionb. Types<ol style="list-style-type: none">(1) Gravity<ol style="list-style-type: none">(a) Urinary drainage(b) T-tube(c) Mushroom/Pezzer/Malecot(2) Vacuum<ol style="list-style-type: none">(a) Hemovac(b) Jackson-Pratt(c) Autologous blood retrieval drainage systems(d) Other	<p>Module 6-C: Objective 6—Match types of wound drains with their correct uses</p>

<p>VI. Collection devices</p> <ul style="list-style-type: none"> A. Gauze B. Bedside drainage C. Bile bag D. Reservoir 	<p>Module 6-C: Objective 6—Match types of wound drains with their correct uses; Objective 11—Select true statements concerning placing and securing or anchoring catheters, drains, and tubes</p>
<p>VII. Anchoring methods</p> <ul style="list-style-type: none"> A. Suture <ul style="list-style-type: none"> 1. Nonabsorbable 2. Cutting needle B. Tape C. Other 	<p>Module 6-C: Objective 11—Select true statements concerning placing and securing or anchoring catheters, drains, and tubes</p>
<p>VIII. Urinary catheterization</p> <ul style="list-style-type: none"> A. Indications <ul style="list-style-type: none"> 1. Specimen collection 2. Retention 3. Decompression of the urinary bladder 4. Monitor urinary output 5. Incontinence 6. Keep urine from contact with surgical wound B. Considerations <ul style="list-style-type: none"> 1. Duration of catheterization 2. Physician’s order 3. Anatomical <ul style="list-style-type: none"> a. Female b. Male 4. Positioning and lighting 5. Patient modesty 6. Sterile technique C. Supplies <ul style="list-style-type: none"> 1. Catheterization tray/set 2. Catheter <ul style="list-style-type: none"> A. Temporary B. Indwelling C. Irrigating 3. Urinary collection device 	<p>Will be covered in <i>Surgical Procedures</i>, Module 3: Genitourinary Surgery</p>

Crosswalk to AST Core Curriculum

<p>D. Procedural steps</p> <ol style="list-style-type: none"> 1. Positioning 2. Preparation 3. Insertion 4. Securing <p>E. Monitoring urinary output</p> <ol style="list-style-type: none"> 1. Measurement 2. Assessment 3. Documentation 	
<p>TISSUE APPROXIMATION</p>	
<p>I. Sutures</p> <p>A. History of suture</p>	<p>Not covered</p>
<p>B. Definitions</p> <ol style="list-style-type: none"> 1. Absorbable 2. Nonabsorbable 3. Monofilament 4. Multifilament 5. Synthetic 6. Natural 7. Tensile strength 8. Ligate 9. Ligature/tie/"stick tie"/suture ligature 10. Continuous tie 11. Instrument tie 12. Inert 13. Capillarity 14. Pliability 	<p>Module 4-C: Objective 3—Match characteristics of suture material with their correct descriptions</p> <p>Module 3-C: Objective 3—Select true statements concerning functional classifications of surgical instruments</p> <p>Module 4-C: Objective 1—List purposes for wound closure and hemostasis</p> <p>Module 4-C: Objective 7—Identify types of surgical stitches</p> <p>Module 4-C: Objective 3—Match characteristics of suture material with their correct descriptions</p>
<p>C. Specifications for suture material</p> <ol style="list-style-type: none"> 1. Must be sterile 2. Sterile technique applied in suture handling process 3. Uniform tensile strength 4. Uniform size 5. Appropriate diameter 6. Knot security 7. Minimal foreign body tissue reaction 	<p>Module 4-C: Objective 5—Select true statements concerning factors that influence suture selection</p>

<p>D. Selection of suture material</p> <ol style="list-style-type: none"> 1. Classifications of suture material <ol style="list-style-type: none"> a. Absorbable sutures vs. non absorbable <ol style="list-style-type: none"> (1) Hydrolysis (2) Enzymatic b. Monofilament sutures vs. multifilament sutures c. Natural vs. synthetic materials 2. Surgeon selection of suture material <ol style="list-style-type: none"> a. Biological characteristics of the suture material <ol style="list-style-type: none"> (1) Absorbable vs. nonabsorbable (2) Capillary vs. non-capillary (3) Inertness b. Healing characteristics of tissue c. Location/length of incision d. Presence or absence of infection, contamination and/or drainage e. Patient characteristics f. Physical characteristics of suture material g. Surgeon preference 	<p>Module 4-C: Objective 3—Match characteristics of suture material with their correct descriptions; Objective 5—Select true statements concerning factors that influence suture selection</p>
<p>E. Suture materials</p> <ol style="list-style-type: none"> 1. Natural absorbable sutures <ol style="list-style-type: none"> a. Materials <ol style="list-style-type: none"> (1) Surgical gut <ol style="list-style-type: none"> (a) Plain surgical gut (b) Chromic surgical gut (2) Collagen sutures b. Handling characteristics of surgical gut and collagen <ol style="list-style-type: none"> (1) Sealed in fluid filled packages <ol style="list-style-type: none"> (a) Flammable (b) Irritating to delicate tissues (c) Use immediately after removal from package handling c. Applications 2. Synthetic absorbable polymers <ol style="list-style-type: none"> A. Materials <ol style="list-style-type: none"> (1) Polydioxanone (PDS) (2) Polyglecaprone 25 (Monocryl) (3) Polyglyconate (Maxon) (4) Polyglactin 910 (Vicryl) (5) Polyglycolic acid (Dexon) (6) Glycoside collected (Polysorb) (7) Glycomer 631 (Biosyn) (8) Poly (L-lactide/glycoside) (Panacryl) 	<p>Module 4-C: Objective 4—Classify sutures by their properties</p>

Crosswalk to AST Core Curriculum

- b. Handling characteristics of synthetic absorbable polymers
 - (1) Expiration date on package
 - (2) Packaged and used dry
- c. Applications
- 3. Natural nonabsorbable sutures
 - a. Materials
 - (1) Silk
 - (a) Virgin
 - (b) Dermal silk
 - (2) Cotton
 - (3) Stainless steel
 - b. Handling characteristics
 - (1) Silk
 - (2) Cotton
 - (3) Stainless steel
 - c. Applications
- 4. Synthetic nonabsorbable polymers
 - a. Materials
 - (1) Surgical nylon
 - (a) Monofilament
 - 1) Ethilon
 - 2) Dermalon
 - 3) Monsof
 - (b) Multifilament
 - 1) Nurolon
 - 2) Surgilon
 - 3) Bralon
 - (2) Polyester fiber
 - (a) Non-coated
 - 1) Ticon
 - 2) Dacron
 - 3) Mersilene
 - (b) Coated
 - 1) Ethibond
 - 2) Ethiflex
 - 3) Tevdek
 - 4) Surgidac
 - 5) Polydek
 - (c) Coatings
 - 1) Polybutilate
 - 2) Polytetrafluoroethylene
 - 3) Silicone
 - (3) Polybutester (Novofil)
 - (4) Polyethylene (Dermalene)
 - (5) Polypropylene (Prolene, Surgipro, Surgilene)
 - (6) Polytetrafluoroethylene (PTFE)
 - b. Handling characteristics of synthetic nonabsorbable suture
 - c. Applications

Module 4-C: Objective 4—Classify sutures by their properties

<p>F. Suture preparation</p> <ol style="list-style-type: none"> 1. Loading and proper placement 2. Cutting 3. Estimating suture needs 4. Sequence of usage 	<p>Module 4-C: Job Sheet 1—Prepare and transfer suture material to sterile field; Job Sheet 2—Straighten sutures; Job Sheet 3—Load and pass a needle holder with swaged needle for right- and left-handed surgeons; Job Sheet 4—Load, thread, and pass a needle holder with eyed needle for right- and left-handed surgeons; Job Sheet 5—Pass ties; Job Sheet 6—Tag and cut sutures</p>
<p>G. Packaging of suture materials</p> <ol style="list-style-type: none"> 1. Box 2. Overwrap 3. Primary packet 4. Inner dispenser 5. Color coding 6. Labeling 	<p>Module 4-C: Objective 8—Identify information on suture packaging</p>
<p>H. Suture size, material, color, and length</p> <ol style="list-style-type: none"> 1. Product code number 2. Lot number 3. Expiration date 4. Needle <ol style="list-style-type: none"> a. Shape b. Quantity c. Point geometry 5. Number of strands 6. Controlled release-swaged 	<p>Module 4-C: Objective 8—Identify information on suture packaging</p>
<p>I. Methods of suturing/suturing techniques</p> <ol style="list-style-type: none"> 1. Halsted's principles 2. Suturing techniques <ol style="list-style-type: none"> a. Simple <ol style="list-style-type: none"> (1) Continuous (running) (2) Continuous running/locking (blanket stitch) (3) Subcuticular stitch (4) Purse-string suture b. Interrupted <ol style="list-style-type: none"> (1) Simple interrupted (2) Interrupted horizontal mattress (3) Interrupted vertical mattress (4) Figure of eight (5) Buried (6) Retention (7) Traction stitch 	<p>Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions; Objective 6—Differentiate between suturing techniques; Objective 7—Identify types of surgical stitches</p>

Crosswalk to AST Core Curriculum

<ul style="list-style-type: none"> 3. Retention sutures <ul style="list-style-type: none"> a. Definition b. Applications c. Materials <ul style="list-style-type: none"> (1) Suture materials (2) Retention bridges, bolsters, and bumpers 4. Endoscopic suturing <ul style="list-style-type: none"> a. Applications b. Methods <ul style="list-style-type: none"> (1) Extracorporeal method (2) Intracorporeal method <ul style="list-style-type: none"> (a) Endo-loop (b) Free hand 5. Accessory devices <ul style="list-style-type: none"> a. Buttons and lead shots b. Umbilical tape c. Vessel loops d. Adhesive skin closure tapes 6. Techniques for cutting suture material 	<p>Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions; Objective 6—Differentiate between suturing techniques; Objective 7—Identify types of surgical stitches</p>
<ul style="list-style-type: none"> J. Layer closure-abdominal wall <ul style="list-style-type: none"> 1. Peritoneum 2. Muscle 3. Fascia 4. Subcutaneous 5. Subcuticular/skin 	<p>Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions; Objective 5—Select true statements concerning factors that influence suture selection</p>
<ul style="list-style-type: none"> K. Surgical application L. Alternative skin closure <ul style="list-style-type: none"> 1. Wound zipper 2. Adhesive skin closure stripe 3. Cyanoacrylate (Dermabond) 	<p>Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions; Objective 4—Classify sutures by their properties</p>
<ul style="list-style-type: none"> II. Surgical needles <ul style="list-style-type: none"> A. Needle characteristics <ul style="list-style-type: none"> 1. Strong 2. Rigid yet flexible 3. Sharp 4. Appropriate shape, size, and diameter 5. Free from burrs and corrosion B. Parts of a needle <ul style="list-style-type: none"> 1. Point 2. Body 3. Eye 	<p>Module 4-C: Objective 10—Identify the components and features of a surgical needle</p>

<p>C. Needle points</p> <ol style="list-style-type: none"> 1. Shape <ol style="list-style-type: none"> a. Cutting <ol style="list-style-type: none"> (1) Conventional cutting (2) Reverse cutting (3) Side cutting b. Taper <ol style="list-style-type: none"> (1) Regular (2) Tapercut (3) Blunt (4) Trocar 2. Applications <p>D. Needle bodies</p> <ol style="list-style-type: none"> 1. 1/4 circle 2. 3/8 circle 3. 1/2 circle 4. 5/8 circle 5. Straight/Keith <p>E. Eyed needles</p> <ol style="list-style-type: none"> 1. French eye 2. Split eye 3. "Eyeless"/swaged <ol style="list-style-type: none"> a. Single-armed attachment b. Double-armed attachment c. Permanently swaged needle attachment d. Control release 	<p>Module 4-C: Objective 11—Identify surgical needles according to their classifications</p>
<p>F. Needle holder selection and loading needles</p> <ol style="list-style-type: none"> 1. Proper size 2. Proper length 3. Proper position of the needle in holder 4. Proper handing to surgeon 	<p>Module 4-C: Objective 13—Select true statements concerning needle selection</p>
<p>G. Needle accountability</p> <ol style="list-style-type: none"> 1. Hand needles on exchange basis to surgeon 2. Inspect needles when returned by surgeon 3. Use sharps container/counter during case 4. Terminal disposal at end of case 	<p>Module 4-C: Objective 14—Complete statements concerning the handling of surgical needles</p>

Crosswalk to AST Core Curriculum

<p>H. Surgical specialty needles</p> <ol style="list-style-type: none">1. Biopsy needles2. Cannulated needles3. Diagnostic needles4. Medication/injection needles5. Irrigation needles	<p><i>Introduction to Surgical Technology</i>, Module 3-D: Syringes and Hypodermic Needles</p>
<p>III. Surgical stapling equipment</p> <p>A. Types of staplers</p> <ol style="list-style-type: none">1. Linear<ol style="list-style-type: none">a. GIA/linear with bladeb. TA/linear2. Intraluminal circular3. Ligating and dividing4. Fascia5. Skin6. Endoscopic <p>B. Reusable vs. disposable staplers</p> <ol style="list-style-type: none">1. Reusable staplers<ol style="list-style-type: none">a. Accuracyb. Loadingc. Operationd. Handlinge. Disassembled and cleaned2. Disposable staplers<ol style="list-style-type: none">a. Pre-assembledb. Self-containedc. Integral or reloadable staple cartridgesd. Stainless steel, titanium, Polysorbe. Handlingf. Disposal <p>C. Advantages</p> <ol style="list-style-type: none">1. Speed2. Accelerated wound healing3. Airtight and leak proof4. Placement through an endoscope <p>D. Disadvantages</p> <ol style="list-style-type: none">1. Cost containment factors2. Errors in technique	<p>Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions; Objective 15—Complete statements concerning surgical staplers, staples and ligating clips; Objective 16—Select true statements concerning uses and benefits of surgical staples and ligating clips/instrumentation</p>

<p>E. Applications</p> <ol style="list-style-type: none"> 1. Skin closure 2. Fascial closure 3. Division of tissue 4. Biopsy/resection 5. Ligation 6. Anastomosis 7. Closure of organs 	<p>Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions; Objective 15—Complete statements concerning surgical staplers, staples and ligating clips; Objective 16—Select true statements concerning uses and benefits of surgical staples and ligating clips/instrumentation</p>
<p>IV. Ligating clips</p> <p>A. Materials</p> <ol style="list-style-type: none"> 1. Stainless steel 2. Titanium 3. Tantalum 4. Absorbable <p>B. Reusable vs. disposable</p> <ol style="list-style-type: none"> 1. Reusable <ol style="list-style-type: none"> a. Clip bar b. Applicator c. Applications 	<p>Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions; Objective 15—Complete statements concerning surgical staplers, staples and ligating clips</p>
<p>V. Tissue adhesives</p> <p>A. Biological adhesives</p> <ol style="list-style-type: none"> 1. Fibrin glue 2. Autologous or homologous plasma 3. Pooled-donor plasma <p>B. Synthetic adhesives</p> <ol style="list-style-type: none"> 1. Cyanoacrylate 2. Methyl methacrylate 	<p>Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions</p>

VI. Tissue repair materials

A. Biologic materials

1. Cargile membrane
2. Fascia lata

B. Synthetic meshes

1. Advantages
 - a. Easily cut to size
 - b. Pliable
 - c. Porous and allow free drainage
 - d. Easily sutured
 - e. Fibrous tissue grows easily through openings
2. Types
 - a. Polyester fiber mesh (Mersilene mesh)
 - b. Polyglactin 910 mesh (Vicryl mesh)
 - c. Polypropylene mesh (Prolene mesh, Marlex mesh)
 - d. Polytetrafluoroethylene (Gore-Tex soft tissue patch)
 - e. Ingrowth mesh (Surgisis)
 - f. Stainless steel mesh

Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions

VII. Tissue replacement materials**A. Biologic wound cover**

1. Autograft
2. Allograft
3. Cryopreserved skin
4. Amniotic membrane
5. Xenograft
 - a. Porcine dermis
 - b. Artificial skin

B. Biologic materials

1. Bone
 - a. Bone grafts
 - b. Bone bank

C. Tissue transplants

1. Human dura mater
2. Human umbilical cord vein graft
3. Genetically engineered/grown

D. Xenograft bio-materials

1. Atriovenous shunts
2. Collagen
3. Corium
4. Human skin equivalent (Apligraf)

E. Synthetic materials

1. Characteristics
 - A. Contour and conform to normal tissue
 - B. Stable
 - C. Adequate blood supply through and around
 - D. Viable and adequate tissue coverage
 - E. Sterile
 - F. Compatible
 - G. Produce no or minimal tissue reaction
2. Types
 - A. Carbon fiber
 - B. Metal
 - C. Methyl methacrylate
 - D. Polyester fiber
 - E. Polyethylene
 - F. Polytetrafluoroethylene
 - G. Silicone
 - H. Other

Module 4-C: Objective 2—Match methods of wound closure to their proper descriptions

SURGICAL DRESSINGS

<p>I. Surgical dressings</p> <p>A. Functions</p> <ol style="list-style-type: none"> 1. Protect incision from microbial contamination and injury 2. Absorb drainage and secretions 3. Provide aesthetic appeal 4. Support the incision 5. Provide pressure to reduce/eliminate dead space 6. Assist in hemostasis 7. Provide pressure to prevent edema and hematoma formation 8. Maintain moist environment allowing for destruction of microbes and preservation of new epithelial tissue 	<p>Module 5-C: Objective 3—Select true statements concerning uses of surgical dressings</p>
<p>B. Types</p> <ol style="list-style-type: none"> 1. Primary 2. Secondary 	<p>Module 5-C: Objective 4—Match the layers of a surgical dressing with their functions</p>
<p>C. Materials</p> <ol style="list-style-type: none"> 1. Primary dressings <ol style="list-style-type: none"> a. Nonadherent <ol style="list-style-type: none"> (1) Telfa (2) Adaptic (3) Xeroform (4) Vaseline gauze (5) Povidone-iodine gauze (6) Absorbent (7) Sponges (8) Kerlix (9) Rolled gauze/Kling 2. Secondary dressings <ol style="list-style-type: none"> a. Absorbent <ol style="list-style-type: none"> (1) ABD (2) Stockinette b. Supportive <ol style="list-style-type: none"> (1) Webril (2) Ace bandage (3) Casts/splints 3. Other dressing materials <ol style="list-style-type: none"> a. Op-site/Biocclusive b. Liquid Collodion c. Aerosol adhesive spray d. Foams, gels, and hydrocolloids 4. Skin preparation materials <ol style="list-style-type: none"> a. Benzoin b. Mastisol 	<p>Module 5-C: Objective 4—Match the layers of a surgical dressing with their functions; Objective 5—Complete statements concerning the use of surgical wound packing; Objective 6—Complete statements concerning specialty dressings</p>

<ol style="list-style-type: none"> 5. Methods to secure dressing materials <ol style="list-style-type: none"> a. Tape <ol style="list-style-type: none"> (1) Silk (2) Paper (3) Foam (4) Elastoplast (5) Plastic (6) Cloth b. Montgomery straps c. Tube gauze 6. Specialty dressings <ol style="list-style-type: none"> a. Stent dressings b. Thyroid collar c. Ostomy bags d. Drain dressing 7. Packing <ol style="list-style-type: none"> a. Plain NuGauze b. Iodophor NuGauze c. Vaginal packing d. Nasal packing 8. Application techniques <ol style="list-style-type: none"> a. Single material b. Non-adherence, absorption, support c. Occlusive d. Semioclusive e. Non-occlusive 	<p>Module 5-C: Objective 4—Match the layers of a surgical dressing with their functions; Objective 5—Complete statements concerning the use of surgical wound packing; Objective 6—Complete statements concerning specialty dressings</p>
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WOUND HEALING

See *Introduction to Surgical Technology*, Crosswalk to AST Core Curriculum

DEATH AND DYING

<ol style="list-style-type: none"> I. Death and dying <ol style="list-style-type: none"> A. Perceptions of death and dying <ol style="list-style-type: none"> 1. Religious beliefs 2. Cultural beliefs 3. Attitudes of family members 4. Attitudes of caregivers 	<p>Module 2-B: Objective 5—Match normal reactions to diagnosis or illness to their proper descriptions</p>
<ol style="list-style-type: none"> <ol style="list-style-type: none"> B. Classifications of death <ol style="list-style-type: none"> 1. Accidental 2. Terminal 3. Prolonged (chronic) 4. Sudden 	<p>Module 2-B: Objective 4—Distinguish between acute and chronic conditions; Objective 17—Distinguish between acute and chronic illnesses; Objective 18—Select true statements concerning clinical and biological death; Objective 19—List those major body systems whose failure results in death</p>
<ol style="list-style-type: none"> <ol style="list-style-type: none"> C. Responses to loss/grief (Kubler-Ross) <ol style="list-style-type: none"> 1. Anger 2. Denial 3. Depression 4. Grief and mourning 5. Acceptance 	<p>Module 2-B: Objective 3—Select true statements concerning the three primary areas that must be addressed when caring for patients with complex needs; Objective 20—Explain the three phases of secondary trauma the family and surgical team may experience when caring for or at the death of a chronic or terminal patient</p>

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<p>D. Quality of life vs. quantity of life</p> <ol style="list-style-type: none"> 1. Palliative procedures 2. Therapeutic procedures 3. Life-support systems 4. Life-sustaining therapy 5. Euthanasia 6. Right to die 7. Advance directives <ol style="list-style-type: none"> a. Living will b. Durable power of attorney 8. Do not resuscitate (DNR) <ol style="list-style-type: none"> a. Medical b. Surgical 	<p><i>Introduction to Surgical Technology, Module 3-A: Legal and Ethical Responsibilities, Objective 2</i></p>
<p>E. Death of a patient in the operating room</p> <ol style="list-style-type: none"> 1. Notification of family and significant others 2. Notification of perioperative manager 3. Notification of chaplain/clergy 4. Preparation of the body for family viewing 5. Forensic issues and coroner's cases 6. Postmortem patient care 7. State law and hospital policy 	<p>Not covered</p>
<p>F. Coping strategies</p> <ol style="list-style-type: none"> 1. Empathy 2. Grieving process 3. Share feelings with others 4. Fears 5. Team effort 6. Support groups for staff members and bereaved families 7. Chaplain/clergy 	<p>Module 2-B: Objective 20—Explain the three phases of secondary trauma the family and surgical team may experience when caring for or at the death of a chronic or terminal patient</p>
<p>G. Organ procurement and transplantation</p> <ol style="list-style-type: none"> 1. Organ procurement <ol style="list-style-type: none"> A. Establishing death B. Consent for procurement C. Procurement team D. Types <ol style="list-style-type: none"> (1) Procurement on life support (2) Procurement without life support 2. Transplantation 	<p>Not covered</p>

DISCHARGE PLANNING

<p>I. Standards and policies of the patient discharge</p> <p>A. Accrediting and provider organizations</p> <p>B. Institutional discharge policy</p> <ol style="list-style-type: none"> 1. Institutional guidelines <ol style="list-style-type: none"> a. Written protocols 2. Patient evaluation <ol style="list-style-type: none"> a. Assessment 3. Responsible adult <ol style="list-style-type: none"> a. Assist with activities of daily living b. Ensure patient complies with postoperative instructions c. Monitor the patient's progress toward recovery 4. Written post operative and follow up instructions <ol style="list-style-type: none"> a. Format <ol style="list-style-type: none"> (1) Make them reader friendly (2) Understandable b. Content: specific treatment instructions, medications, activity, referrals, therapeutic diet instructions (SMART) <ol style="list-style-type: none"> (1) Medications <ol style="list-style-type: none"> (a) Name, purpose, dosage (2) Activity restrictions <ol style="list-style-type: none"> (a) Procedural specific information (3) Diet and elimination <ol style="list-style-type: none"> (a) Restrictions (4) Surgical side effects <ol style="list-style-type: none"> (a) Anticipated sequelae of surgery (5) Possible complications and symptoms <ol style="list-style-type: none"> (a) Signs and symptoms indicative of postoperative complications (6) Treatment and tests <ol style="list-style-type: none"> (a) Patient responsible procedures <ol style="list-style-type: none"> 1) Incision dressing changes and supplies (b) Postoperative tests (7) Access to post discharge care <ol style="list-style-type: none"> (a) Surgeon's phone number (b) Emergency care facility name, phone number and address 	Not covered
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<ul style="list-style-type: none"> (8) Follow-up care <ul style="list-style-type: none"> (a) Postoperative return visit to surgeon (b) Postoperative phone calls 5. Written transfer agreement <ul style="list-style-type: none"> a. Unanticipated hospital admission b. Admission plan and implementation 6. Discharge options <ul style="list-style-type: none"> a. Transportation <ul style="list-style-type: none"> (1) Responsible adult b. Extended observations <ul style="list-style-type: none"> (1) Patient did not meet critical discharge criteria c. Discharge against medical advice (AMA) <ul style="list-style-type: none"> (1) Patient must sign AMA release 	<p>Not covered</p>
<p>II. Recovery from anesthesia</p>	<p>Not covered</p>
<p>III. Critical readiness criteria for discharge</p> <ul style="list-style-type: none"> A. Vital signs B. Respiratory status C. Reflexes D. Mental status—cognition E. Surgical consideration <ul style="list-style-type: none"> 1. Bleeding 2. Extremity circulation F. Pain <ul style="list-style-type: none"> 1. Etiology 2. Pain prophylaxis 3. Pain management G. Nausea and vomiting <ul style="list-style-type: none"> 1. Postoperative nausea and vomiting (PONV) 2. Patient evaluation 3. Postoperative management of nausea and vomiting H. Oral intake I. Voiding J. Anesthesia considerations <ul style="list-style-type: none"> 1. Side effects 2. Malignant hyperthermia 3. Regional anesthetic K. Ambulation 	<p>Not covered</p>

HEALTH AND WELLNESS

I. Physical health A. Cardiopulmonary health B. Muscular strength C. Muscular endurance D. Flexibility E. Body composition	Not covered
II. Physical activity A. Work B. Home C. Exercise	Not covered
III. Nutrition and metabolism A. Nutrition 1. Intake a. Food (1) Carbohydrates (2) Proteins (3) Fats b. Water c. Vitamins and minerals (1) Water-soluble (2) Fat-soluble (3) Essential minerals 2. Output (normal) (1) Urine (2) Feces (3) Perspiration	Not covered
B. Metabolism 1. Catabolism 2. Anabolism	Not covered
IV. Stress A. Definition B. Types 1. External/internal 2. Physical/psychological C. Stress reduction techniques 1. Relaxation 2. Exercise 3. Biofeedback 4. Defense mechanisms	<i>Introduction to Surgical Technology</i> , Module 1-A: Professional Responsibilities and Relations, Student Supplement 1—Student lifestyle considerations

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<p>V. Alternative healing methodologies</p> <ul style="list-style-type: none"> A. Acupuncture B. Herbal remedies C. Aroma therapy D. Touch therapy E. Massage therapy F. Music therapy G. other 	<p>Not covered</p>
<hr/> <p>PACU Not covered</p> <hr/>	
<p>I. Postoperative patient care</p> <ul style="list-style-type: none"> A. Airway maintenance B. Monitor vital signs C. Note skin condition D. Check IV, dressing, catheters, drains 	
<p>E. Postoperative discomforts</p> <ul style="list-style-type: none"> 1. Pain 2. Nausea and vomiting 3. Thirst 4. Abdominal distention 5. Urinary retention 	
<p>F. Postoperative complications</p> <ul style="list-style-type: none"> 1. Hemorrhage 2. Shock 3. Respiratory issues 4. Pulmonary embolus 5. Deep vein thrombosis 	
<p>II. Equipment</p> <p>A. Bedside</p> <ul style="list-style-type: none"> 1. Airway 2. Oxygen 3. Suction 4. Monitors 5. Stethoscope 6. Emesis basin 7. Sphygmomanometer 8. Electrocardiogram 	
<p>B. Immediate access</p> <ul style="list-style-type: none"> 1. Tracheotomy tray 2. Crash cart and defibrillator 3. IV equipment 4. Dressings 5. Bedpan 6. Urinal 	

DECONTAMINATION/DISINFECTION

I. Goals of terminal disinfection/sterilization A. Reduction in the bioburden created by the surgical intervention B. Prevention of cross-contamination C. Prevention of nosocomial infection in the subsequent surgical patient D. Prevention of employee exposure	Module 3-A: Objective 1—List purposes of hospital asepsis
II. Process A. Confine B. Contain C. Reduce/eliminate	Module 3-A: Sanitation, Sterilization, and Disinfection
III. Procedure A. Terminal disinfection of the OR <ol style="list-style-type: none"> 1. Fluids treated and discarded according to hospital policy 2. Suction canister discarded 3. Linens removed from the bed/table accessories 4. Table accessories disinfected with a high-level disinfectant and stored 5. Trash/linen removed from the suite 6. Surfaces wiped/cleaned with high-level <ol style="list-style-type: none"> a. Vertical surface contaminated with visible body substances b. All horizontal surfaces wiped 7. Floor is mopped with clean mop head and high-level disinfectant or wet-vacuumed 8. Furniture/equipment returned to proper storage location 9. Gloves discarded and hands washed 	Module 3-A: Objective 29—Select true statements concerning cleaning and preparing the operating room after a surgical procedure; Objective 30—Select true statements concerning terminal disinfection at the completion of the daily schedule
B. Preparation of the OR <ol style="list-style-type: none"> 1. OR table remade with linen <ol style="list-style-type: none"> a. Cover sheet b. Lift sheet c. Covering for table accessories 2. Suction canister replaced 3. Linen hamper replaced 4. Trash bags accessible 	Module 3-A: Objective 29—Select true statements concerning cleaning and preparing the operating room after a surgical procedure
IV. Disinfection A. Terminology <ol style="list-style-type: none"> 1. Disinfectant 2. Germicide 3. Concurrent disinfection 4. Terminal disinfection 	Module 3-A: Objective 23—List factors that affect the disinfection of items Module 3-A: Objective 6—Complete statements concerning decontamination methods used for cleaning instruments Module 3-A: Objective 22—Distinguish between concurrent and terminal disinfection

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<p>B. Factors when choosing a disinfecting agent</p> <ol style="list-style-type: none">1. Microbe resistance to chemicals<ol style="list-style-type: none">a. Low-levelb. Intermediate-levelc. High-level2. Level of cidal action and their mechanism of destruction<ol style="list-style-type: none">a. Coagulate/denature cell proteinb. Oxidase or bind enzymesc. Alter cell membranes3. The nature of the microbe contamination<ol style="list-style-type: none">a. Normal florab. Organic soil4. Requirements of the cleaning agents vary5. Kill time6. Porosity of the surface/metal7. Method of application8. Temperature9. Surface tension	<p>Module 3-A: Objective 23—List factors that affect the disinfection of items; Objective 24—Match classes of disinfectants with their correct descriptions and usage</p>
<p>C. Types of disinfectants</p> <ol style="list-style-type: none">1. Chemical<ol style="list-style-type: none">a. Halogens and halogen compounds<ol style="list-style-type: none">(1) Chlorine compounds<ol style="list-style-type: none">(a) Chlorinated lime(b) Sodium hypochlorite, bleach(2) Iodophors/iodine-based compoundsb. Heavy metals<ol style="list-style-type: none">(1) Mercurochrome(2) Merthiolatec. Phenols and their derivatives<ol style="list-style-type: none">(1) Hexachlorophene(2) Carbolic acid (phenol)d. Synthetic detergent disinfectants (quaternary ammonium compounds)e. Alcohols<ol style="list-style-type: none">(1) Ethyl (grain)(2) Isopropyl (rubbing)f. Formaldehyde (formalin)g. Glutaraldehyde (2% solution)2. Physical<ol style="list-style-type: none">a. Boiling waterb. Ultraviolet irradiation	<p>Module 3-A: Objective 24—Match classes of disinfectants with their correct descriptions and usage; Objective 26—Match disinfectant agents with their correct descriptions and usage</p>

REPROCESSING

I. Terminal sterilization/disinfection A. Concepts <ol style="list-style-type: none"> 1. Reduce bioburden 2. Reduce risk of transmission of pathogens 	Module 3-A: Objective 1—List purposes of hospital asepsis
B. Considerations <ol style="list-style-type: none"> 1. Submersible/non-submersible 2. Heat-sensitive/non-heat-sensitive 3. Lumens C. Methods <ol style="list-style-type: none"> 1. Manual washing/disinfection <ol style="list-style-type: none"> a. Process b. Considerations 2. Washer-sterilizer <ol style="list-style-type: none"> a. Process b. Considerations 3. Ultrasonic cleaner <ol style="list-style-type: none"> a. Process b. Considerations 	Module 3-A: Objective 6—Complete statements concerning decontamination methods used for cleaning instruments
II. Wrapping/creating a microbial barrier A. Concepts <ol style="list-style-type: none"> 1. Ease in application 2. Microbial barrier 3. Ability to deliver sterile items to the sterile field/margin of sterility <ol style="list-style-type: none"> a. Flat four-way folded item b. Paper/plastic pouch c. Sterilization case d. Dust covers 	Module 3-A: Objective 7—Identify the methods of packaging items for sterilization; Objective 8—Select from a list the recommended characteristics for packaging materials
B. Materials <ol style="list-style-type: none"> 1. Muslin/cotton/polypropylene <ol style="list-style-type: none"> a. Concepts b. Advantages c. Disadvantages 2. Paper <ol style="list-style-type: none"> a. Concepts b. Advantages c. Disadvantages 3. Paper/plastic pouches <ol style="list-style-type: none"> a. Concepts b. Advantages c. Disadvantages 4. Sterilization cases <ol style="list-style-type: none"> a. Concepts b. Advantages c. Disadvantages 	Module 3-A: Objective 7—Identify the methods of packaging items for sterilization

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<p>C. Sealing methods</p> <ol style="list-style-type: none">1. Process tape2. Heat seal3. Adhesive seal4. Sterilization case locking devices	<p>Module 3-A: Objective 7—Identify the methods of packaging items for sterilization; Objective 8—Select from a list the recommended characteristics for packaging materials</p>
<p>D. Process</p> <ol style="list-style-type: none">1. Instrument inspection2. Instrument preparation<ol style="list-style-type: none">a. Instrument disassemblyb. Separation of surfaces for agent penetrationc. Contents protection<ol style="list-style-type: none">(1) Tip protectors(2) Sterilizing cases3. Process monitors<ol style="list-style-type: none">a. Biologicalb. Chemical<ol style="list-style-type: none">(1) Internal(2) External4. Wrapper application<ol style="list-style-type: none">a. Four-way folded wrappingb. Paper/plastic pouch wrapping5. Labeling<ol style="list-style-type: none">a. Departmentb. Contentsc. Initials of processord. Date and lot number of sterilization	<p>Module 3-A: Objective 4—Match surgical supply preparation phases with their proper descriptions</p>
<p>III. Sterilization</p> <p>A. Definitions</p> <ol style="list-style-type: none">1. Bioburden 2. Sterilization3. Disinfection 4. Terminal sterilization5. Terminal disinfections	<p>Module 3-A: Objective 1—List purposes of hospital asepsis</p> <p>Module 3-A: Objective 2—Distinguish between principles for contamination prevention on living and inanimate objects</p> <p>Module 3-A: Objective 4—Match surgical supply preparation phases with their proper descriptions</p>

<p>B. Considerations</p> <ol style="list-style-type: none"> 1. Related to the product <ol style="list-style-type: none"> a. Bioburden b. Bioresistance c. Heat/moisture sensitivity/product stability d. Bioshedding of the packaging material e. Biostate f. Nutritional/health state of the microbe g. Density of the packaging for the sterilizing agent 2. Related to the process <ol style="list-style-type: none"> a. Temperature b. Time c. Purity of the agent and air d. Saturation/penetration e. Capacity of the sterilizer f. Humidity g. Pressure 	<p>Module 3-A: Objective 12—Match factors that affect selection of a particular sterilization process with their appropriate descriptions</p>
<p>C Methods/agents for sterilization</p> <ol style="list-style-type: none"> 1. Variables <ol style="list-style-type: none"> a. Nature of the items to be sterilized <ol style="list-style-type: none"> (1) Submersible/non-submersible (2) Heat-sensitive/non-heat-sensitive (3) Lumens b. Length of sterilization time c. Cost d. Other 2. Agents <ol style="list-style-type: none"> a. Thermal <ol style="list-style-type: none"> (1) Steam under pressure <ol style="list-style-type: none"> (a) Gravity displacement (b) Pre-vacuum (c) “Flash” (2) Dry heat b. Chemical <ol style="list-style-type: none"> (1) EO/ETO—ethylene oxide (2) Activated glutaraldehyde (3) Peracetic acid (4) Acetic acid (5) Hydrogen peroxide plasma c. Ionizing radiation 3. Concepts <ol style="list-style-type: none"> a. Method of microbial destruction <ol style="list-style-type: none"> (1) Denaturation and coagulation of protein (2) Oxidation (3) Interference with growth and reproduction b. Indication/uses c. Parameters d. Advantages e. Disadvantages f. Special considerations of the method 	<p>Module 3-A: Objective 6—Complete statements concerning decontamination methods used for cleaning instruments; Objective 11—Describe methods of sterilization; Objective 14—Select true statements concerning steam sterilization; Objective 15—Select true statements concerning dry heat sterilization; Objective 16—Complete statements regarding peracetic acid systems; Objective 17—Select true statements concerning hydrogen peroxide gas/plasma sterilization; Objective 18—Complete statements concerning ethylene oxide (EO) sterilization; Objective 19—Complete statements concerning disinfection and sterilization with activated glutaraldehyde; Objective 20—Select true statements concerning sterilization by irradiation; Objective 21—Match methods of monitoring the sterilization process with their correct descriptions; Student Supplement 1—Sanitation, sterilization and disinfection</p>

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<ul style="list-style-type: none"> 4. Process monitors <ul style="list-style-type: none"> A. Concepts <ul style="list-style-type: none"> (1) Sterility (2) Exposure to the sterilizing parameters B. Methods <ul style="list-style-type: none"> (1) Mechanical (2) Chemical (3) Biological <ul style="list-style-type: none"> (a) Indications/uses (b) Types <ul style="list-style-type: none"> 1) Bacillus stearothermophilus 2) Bacillus subtilis (4) Bowie-Dick (5) Lot control/expiration date labels 	
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STERILE STORAGE AND DISTRIBUTION

<ul style="list-style-type: none"> I. Sterile storage <ul style="list-style-type: none"> A. Systems B. Parameters C. Shelf life D. Event related sterility E. Handling <ul style="list-style-type: none"> 1. Stock rotation 2. Inspection 3. Transport 4. Out dates 	<p>Module 3-A: Objective 4 briefly covers this competency</p>
<ul style="list-style-type: none"> II. Distribution <ul style="list-style-type: none"> A. Systems B. Selection of inventory C. Delivery D. Patient charging methods E. Record keeping F. Safety practices 	<p>Not covered</p>

POSTOPERATIVE CASE MANAGEMENT

<ul style="list-style-type: none"> I. Goals <ul style="list-style-type: none"> A. Care of the surgical patient B. Reduce bioburden from the surgical intervention C. Prevent nosocomial infections/cross contamination in subsequent patients D. Account for all items E. Prepare items for decontamination/terminal sterilization 	<p>Module 1-C: Objective 3—Select job responsibilities of the surgical technologist during the post-operative phase after surgery; Student Supplement 3—Post-operative duties</p>
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<p>II. Process A. Confine B. Contain C. Reduce/eliminate</p>	<p>Module 3-A: Sanitation, Sterilization, and Disinfection</p>
<p>III. Procedures A. Drape removal 1. Account for instruments, sharps, electro-surgical electrode on drapes 2. Cover the wound/dressing 3. Roll contaminated drapes 4. Discard contaminated drapes</p>	<p>Module 1-C: Objective 6—Select true statements concerning responsibilities of the circulator during the post-operative phase after surgery; Student Supplement 3—Post-operative duties</p>
<p>B. Dismantle the sterile field 1. Account for instruments outside the sterile field 2. Account for light gloves/handles 3. Sharps discarded according to hospital policy 4. Isolate items that can not be washed/sterilized or ultrasonically cleaned 5. Instruments to the processing tray for preparation for terminal sterilization a. Heavy instruments on bottom of tray b. Sharps/delicate items protected c. All box locks opened d. All assembled instruments disassembled 6. Linen in fluid-proof hamper 7. Disposable drapes and supplies in plastic trash bag a. Body substance contaminated items in biohazardous trash b. Non-hazardous waste in regular trash</p>	<p>Module 3-A: Objective 29—Select true statements concerning cleaning and preparing the operating room after a surgical procedure; Job Sheet 7—Clean up an operating room after case</p>
<p>C. Remove gown/gloves 1. Proper technique 2. Handwashing</p>	<p>Module 2-A: Objective 13—Complete statements concerning aseptic guidelines used for gowning and gloving; Job Sheet 10—Remove contaminated gown and gloves</p>