**Course Description:**

Student demonstrates knowledge and skill necessary to carry out delegated tasks associated with the safe and efficient operating room support functions and related procedures. Topics include surgical technology theory, patient care concepts, and sterilization techniques. Student will assist with the passing of instruments and the positioning of patients. Additionally, students will prepare patients for transport to and from surgery, maintain equipment and supplies, and prepare the operating room for surgery.

**Strand 2. Human Body System**

Learners will discuss the various forms, functions and pathophysiology associated with body systems and alterations related to the normal aging process, obtain a health history, perform an evaluation of body systems and document using medical terminology.

**Outcome 2.1. Human Body Form, Function and Pathophysiology**

Discuss the various human body systems, alterations related to the normal aging process and possible dysfunctions.

**Competencies**

2.1.1. Describe the physical characteristics, components and function of blood (e.g., ABO, Rh, blood

cells, precursors and respiratory).

2.1.2. Describe the cardiovascular system and trace the path of blood and factors affecting blood

flow.

2.1.3. Describe how blood pressure is controlled and factors influencing changes in blood pressure.

2.1.4. Describe the function and components of the respiratory system and pulmonary ventilation

and factors influencing respiratory rates.

2.1.5. Describe nerve tissue and the nervous system, including regions of the brain and their

function, the spinal nerves, signal transmission at synapses and the sympathetic and

parasympathetic system.

2.1.6. Describe the musculoskeletal system, including skeletal, cardiac and smooth muscle, various

bone structures and the role of bone marrow and joints and injuries.

2.1.7. Describe the gastrointestinal system, including structures of chewing, swallowing, digestion

and elimination and the role of accessory organs including the liver, pancreas and gallbladder.

2.1.8. Describe the urinary system structures and principles of glomerular filtration, electrolyte

exchanges and their role in the production of red blood cells and the control of blood

pressure.

2.1.9. Describe the immune system and the lymphatic system's role in immunity.

2.1.10. Describe the sensory system, related structures and functions.

2.1.11. Describe the endocrine system, its structures and the role of hormones.

2.1.12. Differentiate between the male and female reproductive system, structures and function.

2.1.13. Describe the integumentary system, related structures and functions.

2.1.14. Describe the difference between pathology and physiology and the conditions typically

observed during a disease state.

2.1.15. Explain the pathophysiology changes associated with or resulting from disease or injury.

*An “X” indicates that the pathway applies to the outcome.*

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| **Pathways** | X | Health Information Management | x | Medical Bioscience | X | Allied Health and Nursing | X | Exercise Science and Sports Medicine |
| **Green Practices** |  | Green-specific |  | Context-dependent |  | Does not apply |

**Outcome 2.2. Evaluate Body Systems**

 Use interviewing techniques, observation, auscultation, palpation and percussion to perform a systematic head‐to‐toe evaluation of the body systems and document using medical terminology.

**Competencies**

2.2.1. Provide privacy and demonstrate cultural sensitivity.

2.2.2. Contact interpretive services for non‐English speaking and English as a Second Language (ESL)

individuals.

2.2.3. Use age‐appropriate language to systematically review disease processes related to each body

system (e.g., vaccinations, allergies, reactions, history of abuse, history of suicidal ideation,

alcohol use, risk behaviors, stressors, sleep patterns, nutritional patterns, occupation, living

conditions, current medications, over‐the‐counter medications, herbals).

2.2.4. Perform vital signs.

2.2.5. Determine level of consciousness and cognition.

2.2.6. Determine pupil reactivity and accommodation.

2.2.7. Determine site, onset, type, quality and level of pain.

2.2.8. Determine what decreases and increases the pain experience.

2.2.9. Auscultate lungs for abnormal breath sounds.

2.2.10. Perform pulmonary function testing (e.g., vital capacity, tidal volumes, total lung capacity).

2.2.11. Auscultate bowel sounds and palpate abdomen for distention and tautness.

2.2.12. Determine joint mobility and muscle strength (e.g., range‐of‐motion).

2.2.13. Identify open wounds, skin abrasions, decubitus and rashes.

2.2.14. Observe for excessive body fluid loss (i.e., blood loss, diarrhea, vomiting, profuse diaphoresis).

2.2.15. Identify symptoms of substance abuse.

*An “X” indicates that the pathway applies to the outcome.*

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| **Pathways** | X | Health Information Management | x | Medical Bioscience | X | Allied Health and Nursing | X | Exercise Science and Sports Medicine |
| **Green Practices** |  | Green-specific |  | Context-dependent |  | Does not apply |

**Outcome 2.3. Medical Terminology**

Decipher medical terms through word origin and structure with an emphasis on derivation, meaning, pronunciation and spelling.

**Competencies**

2.3.1. Build and decipher medical term meanings by identifying and using word elements (e.g., word

roots, prefixes, suffixes, combining forms).

2.3.2. Apply the rules used to build singular and plural forms of medical terminology derived from

the Greek and Latin language.

2.3.3. Use diagnostic, symptomatic and procedural terms to read and interpret various medical

reports.

2.3.4. Use the appropriate abbreviations and symbols to identify anatomical, physiological and

pathological classifications and the associated medical specialties and procedures.

2.3.5. Use proper spelling and pronunciation of medical terms when communicating medical

instructions and preparing medical documentations.

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| **Green Practices** |  | Green-specific |  | Context-dependent |  | Does not apply |

**Strand 3. Therapeutic Interventions**

Learners will administer or assist with environmental, health promotion, pharmacological, emergency, nutritional, exercise and rehabilitative and dental and surgical interventions and/or procedures to improve the individuals’ outcome and quality of life across the life span within their scope of practice, evaluate outcomes and ensure individual’s rights.

**Outcome 3.4. Emergency Interventions**

Respond to emergencies and natural disasters by performing emergency interventions and proper documentation.

**Competencies**

3.4.1. Perform cardiopulmonary resuscitation (CPR), first‐aid and automated external defibrillation

(AED).

3.4.2. Control hemorrhage.

3.4.3. Recognize and respond to anaphylactic shock.

**Outcome 3.8. Surgical Interventions**

Prepare an individual for the surgical experience and assist in the surgical suite, special case management and documentation.

**Competencies**

3.8.1. Transport and position the individual for surgery.

3.8.2. Apply monitoring equipment.

3.8.3. Perform hand scrubbing, gowning and gloving.

3.8.4. Prepare surgical site and drape.

3.8.5. Handle surgical instruments with care and safety during cleaning, sterilization and/or disposal.

3.8.6. Pass various surgical instruments by type, function and name during surgical procedures.

3.8.7. Pass common supplies and equipment, such as suture material, sponges, dressings, drains,

catheters and collection mechanisms.

3.8.8. Obtain and secure surgical specimens.

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| **Pathways** | X | Health Information Management | x | Medical Bioscience | X | Allied Health and Nursing | X | Exercise Science and Sports Medicine |
| **Green Practices** |  | Green-specific |  | Context-dependent |  | Does not apply |

**Strand 4. Assistive Care**

Learners will demonstrate the skills and knowledge to provide personal assistive care for the activities of daily living to a variety of individuals across the life span within their scope of practice.

**Outcome 4.1. Scope of Practice**

Demonstrate the roles and responsibilities of assistive personnel and identify the medical specialists who treat disorders of each body system.

**Competencies**

4.1.1. Describe the guidelines of the governing body concerning abuse, mistreatment, neglect and

misappropriation of an individual’s property.

4.1.2. Inform the supervisor of any changes in the individual’s condition.

4.1.3. Provide input to and work within an age‐appropriate plan of care developed by the

interdisciplinary team for each individual.

4.1.4. Describe the primary purpose of healthcare settings (e.g., long‐term care facility [LTCF], acute

care, home health).

4.1.5. Identify the medical specialists who treat disorders of each body system.

4.1.6. Identify body planes, directions, cavities, quadrants and regions.

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| **Green**  |  | Green-specific |  | Context-dependent |  | Does not apply |

**Outcome 4.3. Microorganisms, Infection Control and Infection**

Use basic principles of infection control to prevent the growth and spread of pathogenic microorganisms and infection.

**Competencies**

4.3.1. Describe the chain of infection (e.g., host, vectors, portal of entry).

4.3.2. Describe mechanisms for the spread of infection, including airborne, vector‐borne, common

vehicle, droplet and contact.

4.3.3. Describe methods of controlling or eliminating microorganisms and the importance of

practices that hinder the spread of infection (e.g., hand washing, disinfecting care areas).

4.3.4. Use personal protective equipment (PPE) when encountering body fluids, potential of

splashing, or respiratory droplets.

4.3.5. Demonstrate various decontamination techniques and procedures.

4.3.6. Demonstrate precaution guidelines.

4.3.7. Maintain isolation precautions.

4.3.8. Identify signs and symptoms of infection (e.g., fever, confusion, areas of redness, swelling,

pain).

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| **Pathways** | X | Health Information Management | x | Medical Bioscience | X | Allied Health and Nursing | X | Exercise Science and Sports Medicine |
| **Green Practices** |  | Green-specific |  | Context-dependent |  | Does not apply |

**Strand 5. Bioscience Research and Development**

Learners will demonstrate the skills and knowledge of interpreting laboratory requests, using protective clothing and hazardous material containment, specimen collection procedures, a variety of laboratory testing and techniques and maintenance of laboratory equipment and supplies.

**Outcome 5.1. Handling, Preparation, Storage and Disposal**

Follow standard operating protocols for handling, preparing, storing and disposing of

specimens, supplies and equipment.

**Competencies**

5.1.1. Use standard operating procedures for the safe use of instruments, equipment and gas

cylinders.

5.1.6. Sample, monitor and record the environmental conditions of the facility (e.g. air quality,

temperature, microbial contaminations).

5.1.9. Verify expiration dates and lot numbers.

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| **Pathways** | X | Health Information Management | x | Medical Bioscience | X | Allied Health and Nursing | X | Exercise Science and Sports Medicine |
| **Green**  |  | Green-specific |  | Context-dependent |  | Does not apply |

**Strand 6. Health Information Management**

Learners will demonstrate basic computer literacy, health information literacy and skills, confidentially and privacy of health records, information security and basic skills in the use of electronic health records.

**Outcome 6.1. Health Information Literacy**

Apply principles of systems operations used to capture, retrieve and maintain information from internal and external sources.

**Competencies**

6.1.1. Define health information management (HIM) and differentiate among data, information and

competency.

6.1.7. Differentiate between the types and content of patient health records and the data collected

(e.g., paper‐based, electronic health records, personal health records).

6.1.8. Describe health record documentation requirements of external agencies and organizations

(e.g., those specified by accrediting bodies, regulatory bodies, professional review

organizations, licensure, reimbursement, discipline‐specific “good practice”).

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| **Pathways** | X | Health Information Management | x | Medical Bioscience | X | Allied Health and Nursing | X | Exercise Science and Sports Medicine |
| **Green Practices** |  | Green-specific |  | Context-dependent |  | Does not apply |

**Outcome 6.2. Confidentiality, Privacy and Security**

Apply the fundamentals of confidentiality, privacy and security to communicate health/medical information accurately and within legal/regulatory bounds across the organization and between organizations.

**Competencies**

6.2.1. Identify components of the court systems and distinguish between public and private law, civil

and criminal law and tort, contract actions and the trial process.

6.2.4. Identify what constitutes the authorized access, release and use of personal health data.

6.2.5. Distinguish between confidential and non‐confidential information within the healthcare

system and document, categorize and prioritize requests for personal health information

according to internal/external privacy and confidentiality guidelines (e.g. Health Insurance

Portability and Accountability Act [HIPAA]).

6.2.8. Describe the possible consequences of inappropriate use of health data in terms of

disciplinary action.

*An “X” indicates that the pathway applies to the outcome.*

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| **Pathways** | X | Health Information Management | x | Medical Bioscience | X | Allied Health and Nursing | X | Exercise Science and Sports Medicine |
| **Green Practices** |  | Green-specific |  | Context-dependent |  | Does not apply |