COURSE INFORMATION

Course Prefix/Number: SUR 101
Course Title: Introduction to Surgical Technology
Lecture Hours/Week: 4.0
Lab Hours/Week: 3.0
Credit Hours/Semester: 5.0

VA Statement/Distance Learning Attendance
Textbook Information
Student Code and Grievance Policy
Attendance Statement (3-30-4000.1)

COURSE DESCRIPTION

This course includes a study of the surgical environment, team concepts, aseptic technique, hospital organization, basic instrumentation and supplies, sterilization, principles of infection control, and wound healing.

COURSE COMPETENCIES

Upon completion of this course, a student will be competent to:

Module 1: The Surgical Technologist, Communication, Team Work, and the Healthcare Facility

- Discuss the development of the surgical technologist profession after World War II.
- Describe the process of certification for the surgical technologist.
- Discuss career opportunities available to the surgical technologist.
- List personal attributes for success as a surgical technologist.
- Describe the process of certification.
- Identify the duties of the surgical technologist.
- Describe the meaning of content and tone in communication.
- Demonstrate various types of body language and describe its meaning.
- Discuss the significance of touch in communication.
- Demonstrate active listening skills.
- Describe the dimensions of assertive behavior.
- Discuss types of problem behavior and how to cope with them.
- Discuss how to approach problem behavior in the workplace.
- Define sexual harassment and discuss how to confront it.
- Describe the qualities of good teamwork.
- Describe three approaches to conflict solving and give examples.
- Describe how poor teamwork results in poor patient care.
- Discuss the purposes of the operating room design.
• Describe safe traffic patterns in the operating room.
• Differentiate restricted, semi-restricted, and non-restricted areas of the operating room.
• Discuss environmental controls in the surgical suite and why they are important.
• Identify operating room staff members and their duties.
• Define hospital policy.
• Describe the process of health care accreditation.
• Describe an organizational chart and explain its significance in an organization.
• Define chain of command.
• State the importance of a job description.
• List common hospital ancillary services and describe their functions.

Module 2: Decontamination, Sterilization, and Surgical Instrumentation
• Review the standards and recommendations related to aseptic technique.
• Use appropriate terminology related to disinfection and sterilization.
• Distinguish between the sterilization and other processes that render objects clean.
• Explain the Spaulding system of classification for selecting a reprocessing system.
• Describe the steps of reprocessing from point of use to sterilization.
• Describe the principles and processes of decontamination.
• Describe the different methods of sterilization used for surgical instrumentation.
• Explain the rationale for proper wrapping of instruments and loading of the steam sterilizer.
• Explain the principles of gas sterilization.
• Describe the environmental concerns associated with the use of the gas sterilizer.
• Define a Prion and the special processing required for instruments exposed to CJD.
• Distinguish between disinfection and sterilization.
• Recognize the hazards associated with the use of chemical disinfectants.
• Describe terminal decontamination of the operating room (OR) environment and equipment.
• Understand how instrument names are used in the OR.
• Review information on instrument manufacturing.
• Identify the different types of finishes on surgical instruments.
• Differentiate types of instruments by their design, and by their function.
• Describe how to inspect instruments for defects.

Module 3: Microbes, Infection, and Wound Healing
• Explain the different classifications of organisms and the binomial system.
• Describe components of the cell and cell transportation.
• Discuss methods of identifying microbes.
• Identify the basic components of a biological microscope and their function.
• Relate the study of microbiology and the process of infection to surgical practice.
• Describe blood-borne pathogens.
• Describe the phases and types of infections.
• List and describe types of bacteria and the diseases they cause.
• Explain the significance of multidrug-resistant organisms.
• List and describe the types of viruses and the diseases they cause.
• List and describe the types of fungi and the diseases they cause.
• List and describe the types of protozoa and the diseases they cause.
• Describe the body’s defense mechanisms against infection.
• List the ways a person acquires immunity to pathogenic organisms.
• Relate a good surgical outcome to the patient's immune response.
• Explain the role of the surgical technologist in wound management.
• Discuss Halstead's principles of surgery.
• Explain the importance of the following concepts and practices: Injury prevention, wound irrigation, retraction thermal and high-frequency coagulation, pneumatic tourniquet, and autotransfusion.
• Describe methods of hemostasis.
• List and describe the types of surgical sponges.
• Discuss the properties of suture and sizing system.
• List the types of absorbable and non-absorbable suture and their uses.
• Identify surgical needles by their shape and type of point.
• Describe the varieties of suture packaging.
• Explain the varieties of suturing techniques, and specialty uses of suture.
• Identify safety precautions to prevent needle stick injuries.
• List and describe different types of tissue and synthetic implants used in surgery.
• Describe common wound drains and how they are used.
• Discuss types of dressings and the indications of their use.
• Explain the process of healing.
• Discuss postoperative wound complications.

Module 4: Anesthesia and Pharmacology
• Explain terms used to describe important anesthesia concepts.
• Identify anesthesia personnel.
• Describe the components of an anesthesia evaluation, and selection process
• Explain the preoperative preparation of the patient for anesthesia.
• Explain the components of physiological monitoring during anesthesia.
• Describe basic anesthesia equipment and its use.
• Describe airway management.
• Define general anesthesia, and describe induction, maintenance, and emergence.
• Describe the methods used in conscious sedation, and dissociative anesthesia.
• Recognize the names of general anesthetic agents.
• Define common types of regional anesthesia, and explain how it is used.
• Define the role of the surgical technologist during the use of regional anesthesia.
• Recognize the names of regional anesthetic drugs.
• List common anesthesia-related and physiological emergencies.
• List the source of drugs.
• Explain the different drug resources available.
• Discuss the importance of drug regulation.
• Explain how drugs are named and formulated.
• Correctly identify the parts of a drug label.
• Discuss ways to prevent drug errors.
• List the seven rights of the medication process.
• Recognize the elements of a prescription and the type of orders
• Describe the role of the surgical technologist in handling drugs, and receiving them on the sterile field.
• Accurately convert values between measurement systems
• List drug administration routes, and delivery devices.
• Define pharmacokinetics and pharmacodynamics.
• Describe immediate and delayed adverse drug reactions.
• Explain the different drug categories and give examples of drugs in each category.

Module 5: PACU, Recovery, Death and Dying
• Describe the layout of PACU.
• Discuss the elements of a handover from the circulating nurse to the PACU nurse.
• List the elements of an assessment.
• Describe the Glasgow Coma Scale.
• Discuss selected types of postoperative complications.
• Discuss the rationale for patient education.
• Define the purpose of discharge planning.
• Define discharge against medical advice (AMA)
• Define end of life and brain death.
• Describe the Kübler-Ross stages of dying.
• Discuss ways to provide comfort and support the patient in the dying period.
• Summarize the conflicts and the stress of families during the dying period.
• Discuss significant ethical issues surrounding death and dying.
• Define cultural competence as it applies to the dying patient.
• List organizations that provide education and services for organ and tissue donation.
• Define the criteria for organ procurement.
• Discuss how health care workers can obtain support for stressful events in the workplace.
• Identify one’s own plan for self-care in times of stress.
• Give examples of a coroner’s case.

METHODS OF INSTRUCTION

Instruction will consist of lecture, lab, multimedia, demonstrations, and role-play.

MINIMAL STANDARDS

Students must have a final average of 80% or better in lecture and a final average of 80% or better in the laboratory component of this course. If either the lecture or the lab average is below 80%, the student will not successfully complete this course. The student must earn a satisfactory final grade (80% or higher) in this course to continue in the Surgical Technology Program.

COURSE REQUIREMENTS

In order to successfully complete SUR 101, the student is required to fulfill the following requirements:
• Complete all reading assignments prior to class sessions.
• Successfully complete all competency-based exams, quizzes, projects and assignments with a minimum average grade of 80%.
• See SUR 101 Addendum for further requirements.
Additional Attendance Requirements (Late Arrival/Early Departure)
Attendance in a class meeting requires being in the classroom prepared for class at the time the class is scheduled to begin and remaining in the classroom until the instructor concludes the class session. Students are expected to arrive to class meetings at or before the scheduled start time and stay for the entire class session. Three (3) late arrivals and/or early departures will equal one (1) absence. Students are required to phone the instructor for all absences and late arrivals.

Academic Integrity
The policies stated in the York Technical College Catalog & Handbook will be enforced. Any student violating these policies will be subject to academic discipline.

EVALUATION STRATEGIES/GRADING PROCEDURES

Grades will be based on performance on written competency-based exams, class work, homework, quizzes and lab grades. Exam material will come from textbook, lecture material, handouts, and class/lab discussion.

Evaluation of Performance
Module Exams ......................... 50%
Lab grade .............................. 20%
Final Exam .............................. 20%
Classwork/Homework ............. 10%

<table>
<thead>
<tr>
<th>Surgical Technology Grade Scale</th>
<th>Lab Grade Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade</strong></td>
<td><strong>Range</strong></td>
</tr>
<tr>
<td>A</td>
<td>93 - 100</td>
</tr>
<tr>
<td>B</td>
<td>85 - 92</td>
</tr>
<tr>
<td>C</td>
<td>80 - 84</td>
</tr>
<tr>
<td>D</td>
<td>75 - 79</td>
</tr>
<tr>
<td>F</td>
<td>Below 75</td>
</tr>
</tbody>
</table>

Exams
There will be 5 Modular Exams and a Final Exam.

Lab Grade
The SUR 101 lab grade will consist of 7 instrument and surgical supply quizzes and 1 cumulative instrument and surgical supply exam. Students must have a quiz average of 80 or higher to be eligible to take the cumulative instrument and surgical supply exam. Students are required to score a 90 or higher on the cumulative instrument and surgical supply exam to be successful in the lab component of this course.

Other Grading Information
Grades will be based on performance on written competency-based exams, class work, homework, quizzes and lab grades. Exam material will come from textbook, lecture material, handouts, and class/lab discussion.
ENTRY LEVEL SKILLS

A student entering SUR 101 should have appropriate entrance scores for the Surgical Technology Program and the ability and willingness to read, comprehend, and communicate effectively.

PREREQUISITES

None

CO-REQUISITES

SUR 102 is a co-requisite for SUR 101 in the Surgical Technology Diploma Program. Failure of either course will result in dismissal from the Surgical Technology Program. If you seek reentry into the Surgical Technology Program, simultaneous, successful completion of SUR 101 and SUR 102 will be required.

Disabilities Statement

Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Office (SRO) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.