COURSE PREFIX NO.: **SUR 102**
COURSE TITLE: **APPLIED SURGICAL TECHNOLOGY**
LECTURE HRS/WK: **3.0**
LAB HRS/WK: **6.0**
CREDITS HRS/SEMESTER: **5.0**

Distance Learning Attendance/VA Statement
Textbook Information

COURSE DESCRIPTION
This course covers the principles and application of aseptic technique, the perioperative role, and medical/legal aspects. This course will also cover microbiology, hemostasis and emergency situations, instrumentation, equipment, and supplies, wound healing, sutures, needles, and stapling devices.

COURSE COMPETENCIES

MODULE 1: Microbiology
1. Describe the historical perspectives important in the development of microbiology.
2. List Koch's postulates and exceptions to the postulates.
3. Identify the primary characteristics of bacteria.
4. Compare and contrast the three basic shapes of bacteria.
5. Identify various bacteria: protozoans, algae, fungi, parasites, and viruses.
6. Describe the functions of the nucleus, endoplasmic reticulum, ribosomes, Golgi complex, mitochondria, lysosomes and centrioles.
7. Compare and contrast aerobic, anaerobic and facultative bacteria species.
8. Explain the ways that a virus enters and damages a host cell.
9. Explain the ways that a pathogen damages a host cell.
10. Clarify the difference between contamination and infection.
11. Compare and contrast chemical and thermal sterilization methods in the operating room.
12. Explain the difference between disinfection and sterilization.
13. Define aseptic technique and describe its application in the operating room.
14. Describe surgical conscience and why it is important to the surgical technologist.
15. Describe the components of the immunity system.
16. Distinguish between active and passive acquired immunity.
17. Define noscomial infections and their meaning to the surgical technologist.
18. Describe the dangers of antibiotic-resistant staphylococcus aureus and implications to operating room personnel.
19. Compare and contrast various diseases and the implications of the surgical technologist.
20. Explain how blood can become infected with microorganisms.

MODULE 2: Asepsis and Sterile Technique
1. Discuss the relationship between the principles of asepsis and practice of sterile technique and surgical patient care.
2. Define and discuss the concept of surgical conscience.
3. Discuss the principles of asepsis.
4. Define the terms related to asepsis.
5. Discuss the sterile practices related to the principles of asepsis.
6. Identify the principles and procedures related to disinfection and sterilization.
7. Demonstrate competency related to the practice of sterile technique.

8. Demonstrate competency in the procedures related to disinfection and sterilization.
9. Discuss the surgical environment and the application of the principles of asepsis to the environment.

MODULE 3: Surgical Case Management

1. Analyze the role of the STSR in caring for the surgical patient.
2. Verify the preoperative routines that must be completed.
3. Demonstrate the transportation of the surgical patient.
4. Apply the principles of surgical positioning.
5. Demonstrate techniques of opening and preparing supplies and instruments needed for any operative procedure with the maintenance of sterile technique at all times.
6. Summarize the methods of preparation of the operative site for surgery.
7. Demonstrate the application of thermoregulatory devices.
8. Interpret the principles and demonstrate the taking and recording of vital signs.
9. Interpret the principles of urinary catheterization and demonstrate the procedure.
10. Analyze how the principles of operative site preparation and urinary catheterization are related both to patient care and to the principles of asepsis.
11. Demonstrate the proper techniques for the surgical hand scrub, gowning, gloving, and assisting team members.
12. Demonstrate the proper technique for preparing supplies and instruments on a sterile field.
13. Demonstrate and explain in detail the procedure for counting instruments, sponges, needles, and other items on the sterile field.
14. Demonstrate intraoperative handling of sterile equipment.
15. Demonstrate the initial steps for starting a surgical procedure.
16. Summarize and demonstrate postoperative routines.

MODULE 4: Instrumentation, Equipment, and Supplies

1. Associate the relationship between instrumentation, equipment, and supplies with quality patient care in the OR.
2. Indicate items that require sterilization prior to use in the sterile field.
3. Recognize basic instruments by type, function, and name.
4. Demonstrate proper care, handling, and assembly of instruments.
5. Differentiate the types of special equipment utilized in OR practice and demonstrate proper care, handling techniques, and safety precautions.
6. Cite the names and functions of accessory equipment and demonstrate proper care, handling, and assembly.
7. Collect and prepare supplies used in the OR.
8. Associate the relationship between instruments, equipment, and supplies and the OR environment with safety concepts.

MODULE 5: Wound Healing, Sutures, Needles, and Stapling Devices

1. Indicate terms relevant to wound healing.
2. Summarize the possible complications of wound healing.
3. Recognize the classifications of surgical wounds.
4. Indicate and give examples of types of traumatic wounds.
5. Recognize the characteristics of inflammation.
6. Recognize the characteristics of the types of healing.
7. Recognize the stages/phases of wound healing.
8. Recognize the types, characteristics, and uses of natural and synthetic absorbable suture materials.
9. Analyze the factors that influence healing and recognize the manner in which they affect the healing process.
10. Demonstrate application of recommended preparation and handling techniques for suturing and stapling devices and provide rationale for choice.
11. Summarize the basic uses and advantages of stapling instruments.

12. Cite and interpret common suture terms.
13. Classify and differentiate suture materials and stapling devices and their usage.
14. Cite and interpret common suture techniques.
15. Distinguish, describe the use of, and demonstrate proper handling of the various types of surgical needles.
16. Compare and recognize the common natural and synthetic nonabsorbable sutures, stating their sources, common trade names, and uses.
17. Assess the types of injury that cause damage to tissues.
18. Demonstrate the proper techniques for the surgical hand scrub, gowning, gloving, and assisting team members.
19. Demonstrate the proper technique for preparing supplies and instruments on a sterile field.
20. Demonstrate and explain in detail the procedure for counting instruments, sponges, needles, and other items on the sterile field.
21. Demonstrate intraoperative handling of sterile equipment and supplies.
22. Summarize and demonstrate postoperative routines.

MODULE 6: Law and Ethics

1. Discuss the relationship between ethics and law.
2. Describe sources of the law.
3. Describe common hospital policies.
4. Discuss the importance of terminology in studying ethics and law.
5. List common areas of negligence in the operating room.
6. Define criminal liability.
7. Discuss why documentation is important.
8. Describe informed consent.
9. Describe and give examples of an incident report.
10. Describe the advance directive and the living will.

MINIMAL STANDARDS

The student **must earn a satisfactory final grade (80% or higher)** in this course to continue in the Surgical Technology Program per the policies as outlined in the surgical Technology Student Handbook.

COURSE REQUIREMENTS

In order to successfully complete SUR 102, the student is required to fulfill the following requirements:

1. Complete all reading assignments prior to class sessions.
2. Successfully complete all competency-based exams, quizzes, projects and assignments with a minimum average grade of 80%.
3. See SUR 102 Course Addendum for further requirements and exam make-up policy.

GRADING PROCEDURES

Grades will be based on performance on written competency-based tests, class work, projects and quizzes. Exam material will come from text book, lecture material, handouts and class discussion.

Grading Scale

93 -100	A
85 - 92	B
80 - 84	C
75 - 79	D
Below 75	F

The student **must earn a satisfactory final grade of (80% or higher)** in this course to continue in the Surgical Technology Program per the program policies as outlined in the Surgical Technology Student Handbook.

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ATTENDANCE

Attendance Policy

The Surgical Technology program will adhere to the attendance policy as written in the York Technical College Catalog & Handbook. (Limited absences to 10% of scheduled class meetings. Absences in excess of 10% will result in a failing grade for the course and removal from the Surgical Technology Program.)

Late arrivals/Early departures

Attendance in a class meeting requires being in the classroom and 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*** *and the Surgical Technology Handbook* will be enforced.

ENTRY LEVEL SKILLS

A student entering SUR 102 should have appropriate entrance scores for the Surgical Technology Program and the willingness to read, comprehend, and communicate effectively.

PREREQUISITES: None

CO-REQUISITES: SUR 101; SUR 130 is a co-requisite for the Surgical Technology Diploma and is not a requirement for the Central Service Certificate.

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