Department: Surgical Technology  
Course Number: SURG 1100

Number of Credits: 1

Course Title: Biomedical Science

Catalog Description: This course will enable students to gain an understanding of the principles of electricity, physics, LASERs, endoscopy and a variety of other machines used in surgery.

Audience: Surgical Technology Students

Fulfills MN Transfer Curriculum Area(s): (Leave blank if not applicable)

Prerequisites or Necessary Entry Skills/Knowledge:

Length of Course: 1 hour per week for 16 weeks

His Course is Usually Offered:
Every other year [ ]  Fall X [ ]  Spring [ ]  Summer [ ]  Undetermined [ ]

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) Academic Content: The academic objectives of this course are:
   a. Understand the principles of electricity and physics.
   b. Practice safe medical practices with electricity, LASERs and endoscopy.
   c. Apply the principles of physics to the machines encountered in the operating room.
   d. Obtain a working knowledge of a variety of machines used in the operating room.

2) Thinking Skills: This course will help students improve the effectiveness of their thinking skills through:
   Obtain a working knowledge of the variety of machines used in the operating room and apply that knowledge to each surgical procedure.
   Apply the knowledge of various safety issues to the clinical setting.
3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   This course will help students improve their oral and written communication skills through learning to have dialogue with peers using the terms and definitions related to the use of physics, robotics, LASERs in the healthcare setting.

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:
   This course will help students recognize, understand, and appreciate human diversity through interactions with other members of the healthcare team.

TOPICS TO BE COVERED:
Physics
Robotics
Computers
LASERs
Endoscopy
Electricity

LEARNING/TEACHING TECHNIQUES used in the course are:

☐ Collaborative Learning    ☑ Problem Solving
☐ Student Presentations    ☑ Interactive Lectures
☑ Creative Projects
☑ Lecture
☐ Demonstrations
☐ Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

☐ Reading    x☑ Tests    ☑ Individual Projects
x☑ Oral Presentations    ☐ Worksheets    ☑ Collaborative Projects
☐ Textbook Problems    x☑ Papers    ☐ Portfolio
☐ Group Problems    ☐ Term Paper
☐ Other (describe below)

The information in this course outline is subject to revision

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or via your preferred Telecommunications Relay Service.

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