

# Washtenaw Community College Comprehensive Report

## SUR 270 Biomedical Science and Minimally Invasive Surgery Effective Term: Winter 2015

### Course Cover

**Division:** Math, Science and Health

**Department:** Allied Health

**Discipline:** Surgical Technology

**Course Number:** 270

**Org Number:** 15320

**Full Course Title:** Biomedical Science and Minimally Invasive Surgery

**Transcript Title:** Biomed & MIS

**Is Consultation with other department(s) required:** No

**Publish in the Following:** College Catalog , Time Schedule , Web Page

**Reason for Submission:** Course Change

**Change Information:**

**Consultation with all departments affected by this course is required.**

**Course description**

**Outcomes/Assessment**

**Rationale:** Proposed Start Semester: Winter 2015. Changes required for accreditation.

**Proposed Start Semester:** Fall 2014

**Course Description:** In this course, students are introduced to the areas of information technology, electricity, laser and robotics as they apply to the surgical technologist role in minimally invasive surgery. As surgical equipment becomes more technical, understanding the fundamental principles of these technologies is essential to the entry-level surgical technologist. Students will practice and be evaluated on their surgical technologist support skills in robotics and minimally invasive surgery.

### Course Credit Hours

**Variable hours:** Yes

**Credits:** 0 – 2

**Lecture Hours: Instructor: 15 Student: 15**

**Lab: Instructor: 30 Student: 30**

**Clinical: Instructor: 0 Student: 0**

**Total Contact Hours: Instructor: 0 to 45 Student: 0 to 45**

**Repeatable for Credit:** NO

**Grading Methods:** Letter Grades

Audit

**Are lectures, labs, or clinicals offered as separate sections?:** NO (same sections)

### College-Level Reading and Writing

College-level Reading & Writing

### College-Level Math

No Level Required

### Requisites

**Prerequisite**

SUR 110 minimum grade "C+"

and

**Prerequisite**

SUR 170 minimum grade "C+"  
and

**Prerequisite**

SUR 180 minimum grade "C+"  
and

**Prerequisite**

SUR 181 minimum grade "C+"

**General Education****Request Course Transfer**

**Proposed For:**

**Student Learning Outcomes**

1. Identify basic components of information technology, lasers and robots used in the surgical setting.

**Assessment 1**

**Assessment Tool:** Exam

**Assessment Date:** Fall 2016

**Assessment Cycle:** Every Three Years

**Course section(s)/other population:** all sections

**Number students to be assessed:** all students

**How the assessment will be scored:** rubric

**Standard of success to be used for this assessment:** 80% of students will score 80% or higher.

**Who will score and analyze the data:** departmental faculty

2. Demonstrate surgical technologist support skills in minimally invasive and robotic surgery settings.

**Assessment 1**

**Assessment Tool:** skills check-list

**Assessment Date:** Fall 2016

**Assessment Cycle:** Every Three Years

**Course section(s)/other population:** all sections

**Number students to be assessed:** all students

**How the assessment will be scored:** rubric

**Standard of success to be used for this assessment:** 80% of students will score 80% or higher on this outcome based assessment.

**Who will score and analyze the data:** departmental faculty

**Course Objectives**

1. Describe the principles of electricity.

**Matched Outcomes**

2. Demonstrate electrical knowledge as it relates to patient safety.

**Matched Outcomes**

3. Apply computer knowledge to the educational process and safe patient care practices in the OR.

**Matched Outcomes**

4. Identify the different lasers and their hazards relating to the surgical environment.

**Matched Outcomes**

5. Identify the basic components of equipment used in robotic surgery.

**Matched Outcomes**

6. Describe the movements of the robotic system manipulators.

**Matched Outcomes****New Resources for Course**

## Course Textbooks/Resources

Textbooks  
Manuals  
Periodicals  
Software

## Equipment/Facilities

### Reviewer

#### **Faculty Preparer:**

*Paulette Woods-Ramsey*

#### **Department Chair/Area Director:**

*Connie Foster*

#### **Dean:**

*Kristin Brandemuehl*

#### **Vice President for Instruction:**

*Bill Abernethy*

### Action

*Faculty Preparer*

*Recommend Approval*

*Recommend Approval*

*Approve*

### Date

*Nov 23, 2014*

*Nov 24, 2014*

*Nov 25, 2014*

*Jan 05, 2015*