

**SEWARD COUNTY COMMUNITY COLLEGE  
COURSE SYLLABUS**

**I. TITLE OF COURSE:** RT2133- Respiratory Therapy Procedures III

**II. COURSE DESCRIPTION: 3 credit hours  
3 credit hours of lecture and 0 credit hours of lab per week.**

This is a three hour lecture course that is designed to further the student's understanding of treatment of the critically ill patient. The student will learn to monitor and assess critically ill patients on the mechanical ventilator and the new technology and accessories that can be applied to mechanical ventilation. This includes the study of hemodynamics with a review of the pathophysiology of the heart and lungs and the placement and use of catheters to monitor blood pressure, central venous pressure, pulmonary artery pressure, and pulmonary capillary wedge pressure. This course will enhance their knowledge of lung protective strategies including high frequency oscillatory ventilation, heliox therapy, and special maneuvers on the mechanical ventilator. Students will learn how to troubleshoot and fix problems for mechanically ventilated patients in addition to methods used to enhance patient-ventilator synchrony and prevent/decrease the risk for ventilator associated events.

For each unit of credit, a minimum of three hours per week with one of the hours for class and two hours for studying/preparation outside of class is expected.

Pre-requisite: Admission to the Respiratory Therapy program.

**III. PROGRAM AND/OR DEPARTMENT MISSION STATEMENT:**

The Respiratory Therapy Program of Seward County Community College provides an educational forum responsive to the needs of the health care community with emphasis to maximize professional potential and foster the development of competent and compassionate respiratory care practitioners.

**IV. TEXTBOOK AND MATERIALS:**

1. Cairo, J. M., (2020). Pilbeam's mechanical ventilation physiological and clinical applications (7th ed.). St. Louis: Elsevier.
2. Kacmarek, R. M., Stoller, J.K., and Heuer, A.J., (2021). Egan's fundamentals of respiratory care (12th ed.). St. Louis: Elsevier.
3. Respi-sim access.

**V. SCCC OUTCOMES**

Students who successfully complete this course will demonstrate the ability to do the following SCCC Outcomes.

- 1: Read with comprehension, be critical of what they read, and apply knowledge gained to real life
- 4: Demonstrate mathematical skills using a variety of techniques and technologies.
- 5: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information.

**VI. COURSE OUTCOMES:**

1. Identify the different devices, parameters, and steps to take to assess and monitor a critically ill patient on the mechanical ventilator.
2. Differentiate mechanical ventilation strategies used based on respiratory illness/disease.
3. Define the different modalities of lung protection strategies.

4. Recommend different ways of improving patient comfort and safety by utilizing protocols and the accessory settings and tools of mechanical ventilation.
5. Identify ways of troubleshooting and problem solving during mechanical ventilation.
6. Recommend the medications used for paralysis, analgesics, and sedation for patients on mechanical ventilation.

## **VII. COURSE OUTLINE:**

1. Noninvasive monitoring for critically ill patient
2. Introduction to Hemodynamics
3. Arterial, pulmonary artery, and central venous catheters
4. Graphics
5. Disease-specific ventilator care
6. Lung Protection Strategies
7. High-frequency oscillatory ventilation in the adult
8. Heliox therapy
9. Methods to Improve ventilation in patient/ventilator management
10. Ventilator-Associated Pneumonia
11. Troubleshooting and problem-solving in mechanical ventilation
12. Critical Care Pharmacology
13. Final

## **VIII. INSTRUCTIONAL METHODS:**

1. Textbooks and Journals
2. Lecture and Discussion
3. Computer Simulations and Tutorials
4. Quizzes
5. Audiovisuals
6. Canvas
7. Kahoot

## **IX. INSTRUCTIONAL AND RESOURCE MATERIALS:**

1. Textbooks and Journals
2. Audiovisual Materials
3. Canvas

## **X. METHODS OF ASSESSMENT:**

SCCC Outcome # 1, 4, and 5 will be assessed and measured by the unit quizzes and module exams.

## **XI. ADA STATEMENT:**

Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Dean of Students at 620-417-1106 or going to the Student Success Center in the Hobbie Academic building, room 149 A.