

**SEWARD COUNTY COMMUNITY COLLEGE  
COURSE SYLLABUS**

**I. TITLE OF COURSE:** RT2013- Pediatric and Neonatal Respiratory Care

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

This is a three credit hour lecture course emphasizing the respiratory therapist role in management of neonatal patients with respiratory diseases. The course is designed to acquaint the student with the unique pathophysiology of the more common neonatal and pediatric pulmonary disorders and the application of respiratory care modalities used in the diagnosis and treatment of patients in this age group. Course content includes patient assessment, etiology, clinical signs and symptoms, and diagnosis of the most common diseases affecting the neonatal/pediatric patient. Treatment approaches will include oxygen and gas therapy, medication delivery, and mechanical ventilatory support.

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: Must be accepted 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. (2018). Mosby's Respiratory Care Equipment. (10th Ed.). St. Louis: Elsevier.
2. Walsh, B.K. (2019). Neonatal and Pediatric Respiratory Care. (5th Ed.) St. Louis: Elsevier.
3. Kacmarek, R. M., Stoller, J. K., and Heuer, A.J. (2020). Egan's Fundamentals of Respiratory Care. (12th Ed.) St. Louis: Elsevier.

**V. SCCC OUTCOMES**

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

II: Communicate ideas clearly and proficiently in writing, appropriately adjusting content and arrangement for varying audiences, purposes, and situations.

**VI. COURSE OUTCOMES:**

1. Differentiate the various methods of assessing the newborn, including maternal and fetal factors.
2. Describe methods used to determine gestational age
3. Recognize the need for resuscitation in the newborn and describe the appropriate procedure.
4. Describe surfactant, including source, appearance in developmental stage, and significance to respiration.
5. Describe the indications, hazards, and special tools and techniques involved in applying selected respiratory care modalities to infants and children, with a special emphasis on ventilatory support modes.
6. Identify the anatomic and physiological differences between the neonate, child, and adult.

7. Evaluate the clinical status of pediatric patients based on patient history, laboratory data, and physical examination.
8. Identify the clinical implications of retractions, nasal flaring, and grunting.
9. Differentiate between types of cough in pediatric patients.
10. Describe the etiology, pathophysiology, clinical manifestations and treatment regimens for the following pediatric disorders:
  - a. Bronchiolitis (RSV)
  - b. Croup
  - c. Epiglottitis
  - d. Cystic Fibrosis
  - e. Asthma
11. Evaluate the indications, hazards, and special techniques involved in applying respiratory care modalities to children.
12. Compare and contrast sympathomimetic agents and parasympatholytic agents; state specific examples of disease states that may benefit from their use.
13. Classify commonly used pediatric mechanical ventilators.
14. Outline the general principles of pediatric critical care management for patients in respiratory failure.
15. Evaluate relevant patient data, select the appropriate settings for initiating pediatric ventilatory support, and recommend appropriate ventilator changes, as needed.

## **VII. COURSE OUTLINE:**

1. Lung Development and Fetal Circulation
2. Assessment of Fetal Growth and Development
3. Neonatal and Pediatric Assessment
4. Arterial and Capillary Blood Gas Analysis
5. Meconium Aspiration Syndrome & Persistent Pulmonary Hypertension of the Newborn (PPHN)
6. Bronchopulmonary Dysplasia (BPD)
7. Infant Respiratory Distress Syndrome
8. Bronchiolitis
9. Croup
10. Epiglottitis
11. Cystic Fibrosis
12. Asthma
13. Cystic Fibrosis
14. Oxygen Therapy
15. Lung Volume Expansion Therapy and CPT
16. Airway Management
17. Pediatric and Neonatal Mechanical Ventilation

## **VIII. INSTRUCTIONAL METHODS:**

1. Canvas
2. Textbooks
3. Discussion Questions
4. Online Assignments

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

1. Canvas
2. Textbooks
3. Journals

#### 4. Handouts

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

SCCC Outcome #1, #2 and #5 will be assessed and measured by satisfactory clinical performance, satisfactory laboratory simulation performance, class participation and successful completion of unit exams and showing comprehension of material.

#### **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.

Syllabus Reviewed: 3/26/2021