



Course Outline

2026-2027 Catalog

RT 142 - Neonatal and Pediatric Respiratory Care

Catalog Description

Transfer Status: NT

Prerequisite: RT 135

Corequisite: RT 140, RT 145

Unit(s): 3.00

Lecture: 42.50 Contact hours/85.00 Out of class hours/127.50 Total hours/2.50 Unit(s)

Lab: 25.50 Contact hours/0.00 Out of class hours/25.50 Total hours/0.50 Unit(s)

Total: 68.00 Contact hours/85.00 Out of class hours/153.00 Total hours/3.00 Unit(s)

Course Description: This course is an introduction to respiratory care of the neonatal and pediatric patient. Emphasis is placed upon growth and development, pathophysiology, clinical assessment, treatment, resuscitation and mechanical ventilatory support. Graded only.

Objectives

Upon successful completion of this course, the student should be able to:

1. Identify factors which indicate a high risk pregnancy/delivery, and be prepared to assist in neonatal resuscitation.
2. Recognize the common neonatal respiratory disease syndromes and describe the appropriate respiratory management skills for each.
3. Assess the neonatal/pediatric patient, applying normal and abnormal vital signs and laboratory test results to the clinical situation.
4. Describe the key components of the management of a patient who requires positive pressure mechanical ventilation.

Course Content

Topic Titles / Suggested Time Topic

Lecture

<u>Topics</u>	<u>Lec Hrs</u>
Cardiopulmonary Anatomy and Physiology of the Fetus and Newborn	8.00
Prenatal Assessment	5.00
Cardiopulmonary Assessment of the Neonate and Child	5.00
Cardiopulmonary Pathophysiology of the Neonate and Child	10.00
Cardiopulmonary Monitoring of the Neonate and Child	5.00
Oxygen Therapy/ Bronchial Hygiene Therapy/ Airway Management/ Resuscitation Principles of Neonate and Child	3.00
Mechanical Respiratory Support of the Newborn	5.00
Extracorporeal Membrane Oxygenation (ECMO)	1.50
Total Hours:	42.50

Lab

<u>Topics</u>	<u>Lab Hrs</u>
Cardiopulmonary Assessment of the Newborn and Child	6.50
Airway Management and Resuscitation	6.50
Mechanical Ventilation - Neonatal and Pediatric	6.00
Oxygen Therapy and Bubble CPAP	6.50
Total Hours:	25.50

Methods of Instruction

- A. Class Activities
- B. Collaborative Group Work
- C. Demonstrations
- D. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- E. Lecture
- F. Reading Assignments

Methods of Evaluation

- A. Quizzes
- B. Oral Presentation
- C. Homework

- D. Final Examination
- E. Written Examinations
- F. Group Participation

Examples of Assignments

Reading Assignments

1. Research and read medical literature on your assigned neonatal disorder to prepare for a classroom presentation on the topic.
2. Read the assigned readings on Prenatal Assessment and be prepared to participate in a classroom discussion on this topic.

Writing Assignments

1. Complete all the items listed on the Learning Objectives, Cardiopulmonary Anatomy and Physiology of the Fetus and Newborn.
2. Complete Fetal Circulation handout, identifying all aspects of the venous and arterial systems.

Out-of-Class Assignments

1. Complete the review questions in the Neonatal Resuscitation Textbook for the chapter on Post-Resuscitation Care.
2. Complete the review questions in the Neonatal Resuscitation Textbook for Chapters on Positive-Pressure Ventilation.

Recommended Materials of Instruction

Walsh, Brian. (2018). Neonatal and Pediatric Respiratory Care. *Saunders Elsevier*, 5th.

Des Jardins, Terry. (2020). Cardiopulmonary Anatomy and Physiology. *Delmar*, 7th. 978-1337794909.

Oakes D. (2017). Neonatal/Pediatric Respiratory Care: A Critical Care Pocket Guide. *Health Educators Publishers*, 7th.

Cairo, J.M., Pilbeam, S. (2022). Mosby's Respiratory Care Equipment. *Mosby*, 11th. 0323712215.

Bloom, Ronald S. (2021). Neonatal Resuscitation Textbook. *American Academy of Pediatrics*, 8th. 978-1610025249.

Minimum Qualifications

Respiratory Technician
Respiratory Technologies

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