

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
RTH 225 – NEONATAL AND PEDIATRIC RESPIRATORY PROCEDURES (3 CR.)

Course Description

Focuses on the cardiopulmonary, physiology, pathology and application of therapeutic procedures in the management of the newborn and pediatric patient. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

General Course Purpose

This course is offered in the last semester of the program. This course is designed as an overview of fetal and neonatal physiology as well as an introduction to neonatal and pediatric pulmonary disease and management. This course will also familiarize the student with basic respiratory care techniques and equipment used with the compromised infant and prepares the student for clinical work with these patient groups.

Course Prerequisites/Corequisites

Prerequisite: RTH coursework in the first 4 semesters of the program or permission of the assistant dean.

Course Objectives

Upon completing the course, the student will be able to:

- A. Explain normal fetal and neonatal development of the cardiopulmonary system
- B. Perform various methods of fetal, neonatal and pediatric patient assessment
- C. Apply neonatal assessment techniques in lab setting
- D. Explain the pathophysiology and treatment of congenital heart diseases
- E. Explain the pathophysiology and treatment of neonatal parenchymal diseases
- F. Explain the basic principles and techniques of ventilator management of the neonate and child
- G. Perform operation of mechanical ventilation techniques
- H. Operate the transcutaneous gas monitoring
- I. Operate, setup and troubleshoot neonatal and pediatric oxygen delivery devices

Major Topics to be Included

- A. Overview of embryologic development
- B. Fetal and neonatal pulmonary structure and function
- C. Physical assessment
- D. Congenital abnormalities of the respiratory tract
- E. Cardiac abnormalities
- F. Pulmonary diseases
- G. Ventilatory management
- H. High frequency oscillation
- I. Transcutaneous gas monitoring
- J. Introduction to Neonatal Resuscitation Program (NRP)