

NORTHWEST ARKANSAS COMMUNITY COLLEGE
RESP 2433: PEDIATRICS and PERINATOLOGY FOR RESPIRATORY CARE
COURSE SYLLABUS
REVISED 8/6/04

COURSE: **RESP 2433: PEDIATRICS and PERINATOLOGY FOR RESPIRATORY CARE**

PREREQUISITES: RESP 2213, RESP 2211, RESP 2242, RESP 2202, RESP 2223, and RESP 2222

COURSE DESCRIPTION: This is a course which introduces the respiratory care student to respiratory care as it relates to neonates, infants and children. Special emphasis will be given to treatment of neonatal diseases and management of premature and term infants on mechanical ventilation.

INSTRUCTIONAL METHODS: Lecture, group discussions, return demonstrations, laboratory exercises and video conferences are the primary methods incorporated. Students will complete special presentations as assigned. Slides, overhead transparencies and handouts are also used.

RATIONALE: The purpose of this course is to provide the student opportunities to develop clinical skills specific to the treatment of pulmonary problems associated with neonates, infants and children.

COURSE OBJECTIVES: By the end of the course, the student will be able to:

1. Outline gestational age according to fetal formation.
2. Describe the significance of fetal-neonatal transition.
3. Describe, in detail, the fetal circulatory pathway and discuss its significance.
4. Describe, in detail, fetal and neonatal circulatory and congenital cardiac disorders, and outline the appropriate treatment.
5. Describe, in detail, fetal and neonatal respiratory disorders, and outline the appropriate treatment.
6. Discuss the signs and symptoms of respiratory distress in neonates and infants.

7. Demonstrate proficiency in the use of the Sechrist IV-200 infant ventilators.

**TOPICAL
OUTLINE:**

This course includes (but is not limited to) the following topics:

Module 1: Fetal Development and Transition to Extrauterine Life
Pages 993 – 1007 Egan

- A. Development of the Respiratory System
- B. L/S ratio
- C. Transition from Uterine to Extrauterine Life
- D. Fetal/Placental Circulation
- E. Cardiopulmonary Events at Birth
- F. Assessment of the Newborn
- G. Evaluation of the Newborn

Module 2: Assessment of the Neonate

Pages 1000 – 1007 Egan

- A. Physiologic Differences
- B. Maternal Factors
- C. Ultrasonography, amniocentesis, fetal heart monitoring, fetal blood gas analysis
- D. Apgar Score
- E. Assessment of Gestational Age
- F. Respiratory Assessment
- G. Thoracic Assessment
- H. ABG Analysis

Module 3: Management of the Critically Ill Neonate

Pages 1007 – 1015 Egan

- A. Temperature Regulation
- B. Fluid and Electrolyte Balance
- C. Nutrition
- D. Infection Control
- E. Oxygen Therapy
- F. Bronchial Hygiene Therapy
- G. Humidity and Aerosol Therapy
- H. Aerosol Drug Therapy
- I. Airway Management
- J. Neonatal Resuscitation

Module 4: Sechrist IV-200

Handouts

- A. Mechanical Features
- B. Principles of Operation

Module 5. Common Disorders of the Newborn and SIDS

Pages 1028 - 1036

- A. Meconium Aspiration Syndrome**
- B. Respiratory Distress Syndrome**
- C. Transient Tachypnea of the Newborn**
- D. Apnea of Prematurity**
- E. Bronchopulmonary Dysplasia**
- F. Persistent Pulmonary Hypertension of the Newborn**
- G. SIDS**

Module 6: Pediatric Assessment

- A. Comparing Neonatal and Pediatric patients**
- B. Blood Gases**
- C. CPAP**

Module 7: Pediatric Respiratory Disorders

- A. SIDS**
- B. Bronchiolitis**
- C. Croup**
- D. Epiglottitis**
- E. Cystic Fibrosis**
- F. Asthma**
- G. Status Asmaticus**
- H. Pneumonia**
- I. Acute Respiratory Failure**

**NORTHWEST ARKANSAS COMMUNITY COLLEGE
RESP 2433: PEDIATRICS FOR RESPIRATORY CARE
FIRST DAY HANDOUT
REVISED 8/6/04**

COURSE: **RESP 2433: PEDIATRICS FOR RESPIRATORY CARE**

INSTRUCTOR: Tom Mattmann, BS, RRT, LRCP
Central Education Facility
One College Drive
Bentonville, AR 72712
619-4252
e-mail: tmattman@nwacc.edu

OFFICE HOURS: See schedule posted on office door.

COURSE DESCRIPTION: This is a one hour laboratory course which introduces the respiratory care student to respiratory care as it relates to neonates, infants and children. Special emphasis will be given to the treatment of neonatal diseases and management of premature and term infants on mechanical ventilation. The laboratory section of the class will concentrate on the equipment and procedures specific to the management of children and infants

RESOURCE MATERIAL: The following items (**IN BOLD**) are required for the course:

1. **Egan's Fundamentals of Respiratory Care**
 Scanlan, et. al.; Sixth ed., 1995 C.V. Mosby

ASSIGNMENTS: The student is required to read all assigned material prior to classtime and to participate in classroom discussions.

EXAMINATIONS & EVALUATIONS: Each topic of study will be followed by a written exam. There is a ninety (90) minute time limit for all written exams except for the midterm and final exam which have a three (3) hour limit. During the laboratory sessions, students perform procedures on their lab partner. The student explains the procedure and required equipment to the instructor prior to performing that procedure in the clinical setting. Time limits for laboratory sessions will be announced at beginning of the session.

MAKE-UP TEST POLICY: Students are required to be present for each scheduled exam. A student who misses an exam because of an excused absence will be allowed to make up the exam within seven (7) days. However, the maximum possible score will be 90%. Tests and quizzes will be distributed at the beginning of class. Any student not present when tests are distributed may take the exam as a make-up with a maximum score of 90%. Any student not present when quizzes are handed out will take a "ZERO" for that quiz. Any exam that is not re-scheduled will be recorded as a "ZERO". A student may be given the option of a re-examination of similar content if an exam score falls below 76%. A re-examination will have a maximum possible score of 76%. A student may only take two (2) make-up and/or re-examinations in this course. The midterm and final exam are not subject to re-examination.

GRADING: Grades for each exam, as well as the final class average, are based upon total points possible and attendance. The final grade will be calculated as follows:

Final percentage grade =

$$80\%: \frac{\text{Exam, Quiz \& Final Points Received}}{\text{Total Points Possible}} \times 100$$

10%: Attendance
10 points possible. 1 absence = 1 point deduction.

10%: Quizzes and Homework points

The grading scale for the course is as follows:

- A = 93% - 100%
- B = 85% - 92%
- C = 76% - 84%
- D = 70% - 75%
- F = Below 70%

Scores below 76% are unacceptable. THE STUDENT MUST COMPLETE THE COURSE WITH A CUMULATIVE AVERAGE OF NO LESS THAN 76% TO PASS THE COURSE.

DROP DATE:
GENERAL
REMARKS:

The final date to drop this course with a "W" is November 5, 2004. This course will follow the Program policies as specified in the Respiratory Care Technician Program Handbook and Allied Health Student Handbook.

Students who wish to review or discuss their progress are encouraged to schedule an appointment with the instructor. All exams, scores and evaluations are confidential, but are kept on file for the student to review.

STUDENTS WITH
DISABILITIES:

If you are a student with a disability, and if you will be requesting accommodations, it is your responsibility to contact the Counseling Office at 636-9222. The Counseling Office will recommend appropriate accommodations to your instructor. The instructor will identify for you which accommodations will be arranged.

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