El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Respiratory Care Technology**
COURSE RUBRIC AND NUMBER	**RSPT 2453**
COURSE TITLE	**Neonatal/Pediatric Cardiopulmonary Care**
COURSE CREDIT HOURS	**4 4 : 0**
	Credits Lec Lab

I. Catalog Description

Studies neonatal /pediatric cardiopulmonary care. A grade of "C" or better is required in this course to take the next course. **Prerequisite: RSPT 2358. (4:0)**

II. Course Objectives

A. Unit I. Development of the Respiratory System

1. Describe the periods of lung development.
2. Identify the key elements of normal fetal anatomy.
3. Identify the key elements of normal fetal circulation.
4. Explain an abnormal transition of the fetus from uterine to extra-uterine life and recall the appropriate interventions required.
5. Describe the key anatomical and physiological differences between the neonate, child, and adult that dictate a different care plan.
6. Describe the development of the placenta and umbilical cord and identify the major anatomical structures of each.
7. Describe how ultrasonography is used to assess fetal status.
8. Define amniocentesis and describe the role of each of the following:
    a. L/S ratio
    b. Bilirubin level
    c. Describe meconium staining.
9. Describe the importance of overcoming surface forces in adapting to extrauterine life.

B. Unit II. Assessment of the Newborn

1. Assess the fetus and newborn infant, explaining maternal and fetal risk factors that lead to adverse outcomes.
2. Recognize the physical signs that are used to determine gestational age.
3. List purposes of the neonatal physical examination.
4. Discuss the physiology of thermoregulation including a description of the thermo neutral zone and nonshivering thermogenesis.
5. Discuss how a neonate reacts to cold stress and to hyperthermia.
6. Assess the fetus and newborn using blood gas interpretation from UAC, UVC and cord samples.

C. Unit III. General Management of the Critical Ill Neonate

1. Discuss why x-rays alone cannot be used for diagnosis
2. Describe a systematic method of interpreting a chest x-ray.
3. List the indications for chest physiotherapy and aerosolized drug therapy.
4 Discuss the procedure for placement of an inline SVN to a mechanical ventilator.
5. Describe the indications for and hazards of suctioning.
6. Discuss the indications for and hazards of oxygen therapy.

D. Unit IV. Common Disorders of the Newborn

1. Discuss the etiology, pathophysiology, clinical manifestations, and treatment for the following neonatal disease processes:
    a. Meconium aspiration syndrome
    b. Respiratory distress syndrome
    c. Transient tachypnea of the newborn
    d. Apnea of prematurity
    e. Persistent pulmonary hypertension.
    f. Congenital abnormalities.
    g. Bronchopulmonary dysplasia
2. Identify and describe the four stages of intraventricular hemorrhage.
3. Define asphyxia and identify its incidence in neonates.
4. Describe the pathophysiologic changes that occur with asphyxia, its consequences, and treatment.
5. Identify the cause of meconium release in utero.
6. Describe the diagnosis and treatment of meconium aspiration.
7. Relate the diagnosis and treatment of a pneumothorax to a pneumomediastinum and pneumopericardium.
8. Identify and discuss those factors responsible for the onset of transient tachypnea of the newborn (TTN).
9. Describe the indications for phototherapy use.

E. Unit V Congenital Heart Disease

Identify and synthesize aspects associated with the following conditions of congenital heart disease in terms of etiology, radiologic findings, pathogenesis, pathophysiology, diagnosis, treatment, and prognosis.

A. Tetralogy of Fallot
B. Ventricular Septal Defect
C. Atrial Septal Defect
D. Patent Ductus Arteriosus
E. Coarctation of the Aorta

F. Unit VI. Pediatric Respiratory Care

1. Identify the etiology, pathophysiology, clinical manifestations, and treatment regimens for the following pediatric disorders:
    a. Sudden infant death syndrome and preventive measures.
    b. Gastroesophageal reflux
    c. Bronchiolitis
    d. Croup
    e. Epiglottitis
    f. Cystic fibrosis

2. Identify the respiratory disorders in children with lung disease.
3. Describe the pathophysiology and mechanisms by which reflux causes respiratory dysfunction.
4. Identify and describe the indication for pneumogram studies with and without pH probe.

III. THECB Learning Outcomes (WECM)

1. Describe fetal development and transition to extrauterine life.
2. Assess maternal and fetal history.
3. Modify therapy to neonatal/pediatric patients.
4. Describe the etiology, pathophysiology, clinical manifestations and management of neonatal/pediatric disorders.
5. Analyze, interpret and apply patient data in selective patient care settings.

IV. Evaluation

1. Grading Scale:

90 to 100	A
80 to 89	B
75 to 79	C
74 or below	I or F

2. Grade Percentage of final grade:

Unit Exams	60%
Home Work & Quizzes	20%
Final Exam	20%
Total	100%

V. Disability Statement (American with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.