JEFFERSON COLLEGE
COURSE SYLLABUS

RCP260
Neonatal and Pediatric Respiratory Care
3 Credit Hours

Prepared by:
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Elizabeth Check, Dean, Career and Technical Education
Mary Beth Ottinger, Division Chair
# RCP260 Neonatal and Pediatric Respiratory Care

## I. CATALOGUE DESCRIPTION

A. Prerequisite – RCP210 Introduction to Mechanical Ventilation, RCP225 Respiratory Care Skills Lab III, RCP170 Respiratory Care Clinical II, and RCP200 Respiratory Care Specialties; all courses must be completed with a grade of “C” or better.

B. Credit hour award - 3

C. Description - This course provides a presentation on pediatric and neonatal respiratory care to include; embryonic development of the cardiopulmonary system, cardiopulmonary malformations, and lung disease as well as treatment modalities. The course will also cover the technical aspects of assessment including gestational age, APGAR scoring, Silverman scoring, equipment, and maintenance of pediatric/neonatal respiratory care devices, including mechanical ventilator systems. (S)

## II. EXPECTED LEARNING OUTCOMES/CORRESPONDING ASSESSMENT MEASURES

<table>
<thead>
<tr>
<th>Expected Learning Outcomes</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>Describe the development of fetal, neonatal and pediatric patients</td>
<td>Class activity</td>
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<td>Homework</td>
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<td>Summative Exam</td>
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<tr>
<td>Demonstrate proper technique for assessment and resuscitation of the neonate and pediatric patient</td>
<td>Class activity</td>
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<td>Homework</td>
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<td>Summative Exam/skill demonstration</td>
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<tr>
<td>Analyze results of specific diagnostic tests to determine disease or disorder and initiate proper therapy to treat or support such disorders</td>
<td>Class activity</td>
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<td>Homework</td>
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<td>Summative Exam</td>
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<tr>
<td>Judge the assessment tools available to the respiratory therapist and apply the proper usage of these tools as pertains to the neonatal and pediatric patient</td>
<td>Class activity</td>
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<td>Homework</td>
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<td>Summative Exam/skill demonstration</td>
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<td>Evaluate proper ventilation therapy and settings for each disease or disorder</td>
<td>Class activity</td>
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<td>Homework</td>
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<td>Summative Exam</td>
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<td>Differentiate between multiple therapies available for each disorder</td>
<td>Class activity</td>
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<td>Homework</td>
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<td>Summative Exam</td>
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<td>Describe each disease process for the neonatal and pediatric patient</td>
<td>Class activity</td>
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<td>Homework</td>
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<td>Summative Exam</td>
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OUTLINE OF TOPICS

A. Fetal development, assessment, and delivery
   1. Fetal lung development
   2. Fetal gas exchange
   3. Assessment and high-risk delivery
   4. Neonatal resuscitation

B. Assessment and monitoring of neonatal and pediatric patient
   1. Exam and assessment of neonatal and pediatric patient
   2. Pulmonary function testing of the neonatal and pediatric patient
   3. Radiographic assessment
   4. Bronchoscopy
   5. Blood gas analysis
   6. Noninvasive monitoring

C. Therapeutic procedure for treatment of neonatal and pediatric disorders
   1. Oxygen administration
   2. Aerosol administration
   3. Airway clearance techniques and management
   4. Surfactant replacement
   5. Continuous positive airway pressure and noninvasive ventilation
   6. Mechanical ventilation
   7. High frequency ventilation
   8. Administration of special gas mixtures
   9. Extracorporeal life support
   10. Organ transplantation
   11. Pediatric advanced life support

D. Neonatal and pediatric disorders
   1. Pulmonary disorders
   2. Surgical disorders
   3. Complications of respiratory care
   4. Congenital heart defects
   5. Sudden infant death syndrome
   6. Airway disorders and parenchymal lung disorders
   7. Asthma
   8. Cystic fibrosis
   9. Acute Respiratory distress disorder
   10. Shock and anaphylaxis
   11. Sepsis and meningitis
   12. Thermal injury
   13. Head injury and cerebral disorders
   14. Thoracic trauma
   15. Drowning
   16. Poisoning
   17. Neurologic and neuromuscular disorder
   18. Disorders of the pleura

E. Neonatal and pediatric transient care and ambulatory care
   1. Transport and ambulatory care
   2. Home care
III. **METHOD(S) OF INSTRUCTION:**
   A. Lecture
   B. Readings from textbook
   C. Supplemental handouts
   D. Classroom activities
   E. Participation in active learning by computer programs, games, and internet-based activities.
   F. Peer interactive activities and discussions in classroom and online

IV. **REQUIRED TEXTBOOK:**


V. **REQUIRED MATERIALS**
   A. Course homepage available through jeffco.edu
   B. A computer with internet access (available through the Jefferson College Labs).
   C. Paper, notebooks, pens, pencils with erasers.

VI. **SUPPLEMENTAL REFERENCES**
   A. Class handouts
   B. Videos

VII. **METHOD OF EVALUATION (basis for determining course grade)**
   A. Classroom activities          10%
   B. Homework                      20%
   C. Summation examinations-comprehensive 60% - Final is worth at least 30% of total grade
   D. Attendance                    10%
   E. Grading scale:  
      A=92-100%
      B=86-91.9%
      C=80-85.9%
      D=70-79.9%
      F=0-69.9%
VIII. ADA STATEMENT
Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Library; phone 636-797-3000, ext. 169).

IX. ACADEMIC HONESTY STATEMENT
All students are responsible for complying with campus policies as stated in the Student Handbook. Any student who cheats or plagiarizes will be subject to dismissal from the respiratory program and will be referred to the college for disciplinary action. (see College website, http://www.jeffco.edu/jeffco/index.php?option=com_weblinks&catid=26&Itemid=84)