JEFFERSON COLLEGE

COURSE SYLLABUS

RCP150
Cardiopulmonary Pathophysiology

3 Credit Hours

Prepared by:
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RCP150  Cardiopulmonary Pathophysiology

I. CATALOGUE DESCRIPTION
   A. Prerequisite – RCP130 Cardiopulmonary Pharmacology, RCP120 Respiratory Equipment and Noncritical Floor Care, RCP125 Respiratory Care Skills Lab I, RCP110 Cardiopulmonary Anatomy and Physiology, and RCP100 Introduction to Respiratory Care; all courses must be completed with a grade of “C” or better.

   B. Credit hour award - 3

   C. Description - This course covers the etiology, pathology, symptomology, and treatment of various lung diseases, to include: C.O.P.D., asthma, restrictive lung disorders, infectious lung diseases, occupational lung diseases, pulmonary neoplasm, and pulmonary manifestations of other disease states. This course covers cardiopulmonary abnormalities and corrective techniques as related to respiratory therapy. Included are the concepts of the cardiovascular system, ventilation, diffusion of pulmonary gases, hemodynamic measurements, ventilation perfusion relationships, oxygen and carbon dioxide transport, acid base balance, and arterial blood gas analysis. (Su)

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 differences between various diseases of the cardiopulmonary system</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>Demonstrate proper assessment techniques to differentiate between diseases</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>Contrast the effects of various diseases on the entire human body</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>Decide appropriate therapy for each disease covered</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>Apply the many varying therapies for disease, based on changing outcomes as the human body may or may not change and respond to each therapy</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>Assess effectiveness of therapy</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>Analyze probable outcomes based on therapist driven protocols</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>Assess which diagnostic tools are needed to determine stages of disease process for appropriate diseases presented</td>
<td>Class activity</td>
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<td></td>
<td>Homework</td>
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<tr>
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<td>Summative Exam</td>
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III. OUTLINE OF TOPICS:
A. Assessment of Respiratory Disease
   1. Clinical data obtained at patient bedside
   2. Clinical data obtained from laboratory test and special procedures
   3. Therapist driven protocols
B. Obstructive Airway Disease
   1. COPD
   2. Asthma
   3. Bronchiectasis
   4. Cystic Fibrosis
C. Infectious Pulmonary Disease
   1. Pneumonia
   2. Lung Abscess
   3. Tuberculosis
   4. Fungal Disease
D. Pulmonary Vascular Disease
   1. Pulmonary Edema
   2. Pulmonary Embolism
E. Chest and Pleural Trauma
   1. Flail Chest
   2. Pneumothorax
F. Disorders of the Pleura and of the Chest wall
   1. Effusion and Empyema
G. Environmental Lung Disease
H. Neoplastic Disease
I. Diffuse Alveolar Disease
J. Neurologic Disorders and Sleep Apnea
   1. Guillain-Barre Syndrome
   2. Myasthenia Gravis
   3. Sleep Apnea
K. Cardiac Problems affecting the Respiratory System
   1. Abnormal EKG’s
   2. CHF
L. Newborn and Early Childhood Respiratory Disorders
   1. Newborn and early childhood genetic respiratory Disorders
   2. Meconium Aspiration Syndrome
   3. Transient Tachypnea
   4. Respiratory Distress Syndrome
   5. Pulmonary Air leak Syndrome
   6. Respiratory Syncytial Virus
   7. Bronchopulmonary Dysplasia
   8. Congenital Diaphragmatic Hernia
   9. Croup Syndrome
M. Other pathological Problems of the Respiratory System
   1. Near Drowning
   2. Smoke Inhalation and Thermal Injuries
   3. Postoperative Atelectasis
   4. Nutritional Imbalances for respiratory patients
IV. METHOD(S) OF INSTRUCTION
1. Lecture
2. Readings from textbooks
3. Supplemental handouts
4. Classroom activities
5. Participation in active learning by computer programs, games, and internet-based activities
6. Peer interactive activities and discussions in classroom and online

V. REQUIRED TEXTBOOK(S)


VI. REQUIRED MATERIALS (student)
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.

VII. SUPPLEMENTAL REFERENCES
A. Class handouts
B. Videos

VIII. 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%
IX. 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).

X. 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.

College website,
http://www.jeffco.edu/jeffco/index.php?option=com_weblinks&catid=26&Itemid=84