Midland College
Syllabus
RSPT 1307
Cardiopulmonary Anatomy and Physiology (3-0-0)

Course Description:

In this course the student will gain an increased understanding of the anatomy and physiology of the cardiovascular, renal and pulmonary systems. This will include the terminology used in respiratory physiology.

Text, References and Supplies:


Student Learning Outcomes:

Upon successful completion of the course the student will:

1. Identify the roles of the nervous system in maintaining homeostasis
2. Identify the role of the respiratory system in maintaining homeostasis
3. Describe ventilation
4. Identify lung volumes and capacities
5. Discuss diffusion of pulmonary gases
6. Identify components of the circulatory system
7. Describe oxygen transport
8. Describe acid/base balance
9. Discuss ventilation/perfusion relationships
10. Explain neural control of ventilation
11. Discuss fetal lung development
12. Describe the effects of aging on the respiratory system
13. Discuss the electrophysiology of the heart
14. Explain the standard 12-lead ECG system
15. Interpret various ECGs
16. Identify direct hemodynamic measurements
17. Identify structures of the renal system
18. Discuss sleep physiology and its association with the cardiopulmonary system
19. Discuss the effects of exercise on the cardiopulmonary system
20. Discuss high altitude effects on the cardiopulmonary system
21. Discuss the effects of high pressure environments on the cardiopulmonary system
22. Explain nerve, cardio, respiratory and renal interrelationship
23. Explain fluid electrolyte significance
24. Demonstrate physical assessment technique
Student Contributions, Responsibilities and Class Policies:

Each student will spend at least 6 hours per week preparing for class. Attendance is critical in this class and is outlined in the Midland College Catalog, the student handbook and the Respiratory policy handbook. All classroom performance and behavior will be considered academic.

Evaluation of Students:

A minimum of (4) tests will be given including a comprehensive final (unless otherwise designated by the instructor). The final exam will carry the same weight as other exams (not quizzes). Weekly quizzes will be averaged and will equal one exam. Test questions will come from lecture, reading assignments and homework assignments. Most tests will be objective in nature.

1. Tests (minimum of four), required term projects 80%
2. Attendance, participation and attitude 10%
3. Term project and or term paper 10%

Total 100%

Course Schedule:

The class meets for 3 lecture hours per week. 1 ½ hours on Tuesday and Thursday from 1:30 to 3:00 pm.

Americans with Disabilities Act (ADA):

Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact the Shep Grinnan as soon as possible. Mr. Grinnan’s office is located in the Scharbauer Student Center Building. These conditions may include documented physical or educational disabilities. Please be aware that services or accommodations are not automatic. Each student must request them and secure the proper authorizations/documentation.

Division Information: Health Sciences

<table>
<thead>
<tr>
<th>Division Dean:</th>
<th>Carmen Edwards, DNP, MSN, RN</th>
<th>DFHS Bldg. RM 234</th>
<th>432-686-4822</th>
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<tbody>
<tr>
<td>Program Chair:</td>
<td>Bob Weidmann, BS, RPFT, RRT-NPS, RCP</td>
<td>AMS Bldg. RM A 34</td>
<td>432-685-5549</td>
</tr>
<tr>
<td>Division Secretary:</td>
<td>Kay Floyd</td>
<td>DFHS Bldg. RM 206</td>
<td>432-685-4600</td>
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