

## RSPT 1307: CARDIOPULMONARY ANATOMY AND PHYSIOLOGY COURSE SYLLABUS

### COURSE DESCRIPTION

An introduction to the anatomy and physiology of the cardiovascular, renal, pulmonary systems. Includes terminology used in respiratory physiology. (3 sem hrs; 3 lec)

### COURSE PREREQUISITE

There are no prerequisites for this course.

### SUGGESTED TEXTBOOK

Des Jardine. *Cardiopulmonary Anatomy and Physiology*. Delmar, 4th Ed. 2002.

### STUDENTS WITH DISABILITIES

Any student in this course who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact *disAbility Services* located within the Student Service Center, Room 119 as soon as possible.

### COURSE GOALS AND COMPETENCIES

In order to successfully complete the requirements for this course, the student must demonstrate the competencies as described by the following goals and objectives as evaluated by the faculty in the program.

#### A. GOALS

Given the course textbook, personal notes, handouts, and other learning activities, the student should:

1. Learn the human anatomy of the cardiopulmonary system to include some developmental changes from the embryo to an adult.
2. Learn basic human cardiopulmonary physiology.
3. Apply the knowledge learned to patients in a clinical environment.

A minimum grade of "C" must be earned by each student to successfully complete the goals of this course.

#### B. PERFORMANCE/LEARNING OBJECTIVES (MINIMUM COMPETENCIES)

Given the course textbook, personal notes, handouts, and course presentations, the student should demonstrate competence in each of the specified areas by scoring 70% on the examination over the material listed as evaluated by the faculty in the department.

1. Describe the normal anatomy of the head and upper airway.
2. Describe the normal anatomy of the cardiovascular system, mediastinum, and lungs.
3. List and describe the functions of the muscles of respiration.
4. Identify the lung volumes and subdivisions.

5. Describe the compliance of the lungs as it relates to the mechanics of breathing.
6. Describe the role that surface tensions plays with the expansion and deflation of the lung.
7. Define airway resistance, discuss its role in ventilation and how different factors regulate airway resistance in the body.
8. Describe deadspace in the lungs and its affect on alveolar ventilation.
9. Describe the relationships of minute volumes, alveolar volumes, and deadspace volumes.
10. Define pulmonary gas diffusion and discuss the physical and physiological factors that affect diffusion.

## REQUIRED EXAMINATIONS

This course will have three to four major examinations during the semester and a comprehensive final at the end. If a student is absent for a regularly scheduled examination, the student may take a makeup examination but the highest grade a student can earn is 75%. All material given in this course will be tested during the four major examinations.

## EVALUATION

1. Each examination will be weighted and will have a specific value of points awarded for correct answers.
2. Short unannounced quizzes will be given at the beginning of the class. The content of the quiz will be material from the previous class. There is no makeup on a missed quiz but two quizzes may be dropped at the end of the course. The total of these quizzes will be the equivalent of a major exam.
3. Additional assignments may also be given with a specified value or points.
4. At the end of the course, all possible points from examinations, quizzes and other assignments will be totaled. This total will be the maximum possible points a student could earn.
5. The number of points earned by a student will be divided by the maximum possible points for the course. The quotient will be expressed as a percent and converted to a final grade.

The grading scale for this course is:

A	=	90 - 100
B	=	80 - 89
C	=	70 - 79
D	=	60 - 69
F	=	score less than 60

### Components of the Final Grade

1. Major examinations - 100 pts. ea.*	400*
2. FINAL examination - 150 pts.*	150*
3. Research paper - 100 points.....	100**
4. Problems - 25 to 100 pts.....	50*
5. Short Quizzes .....	100+

Total                      700 - 800+

\* The weight of each evaluation tool may vary due to the construction of an individual exam and the content covered.

\*\* A research paper will be required on a physiology topic chosen by the instructor if a student does not have a 75% average on the first three major examinations. Any student may elect to complete a research paper which will be averaged into the final grade. Format will be provided.

5. Students who have perfect attendance will receive 2 points added to their final grade. Perfect attendance will be defined as meeting all classes at regularly scheduled times; there are **no** exceptions. Perfect attendance will be lost if a student is over 10 minutes late for the beginning of a class or leaves a class before the class has ended. A student will not lose perfect attendance if Amarillo College closes classes or if the instructor cancels a class.

#### STUDENT RESPONSIBILITIES AND CLASSROOM ETIQUETTE

1. The student should read assignments prior to class and be prepared to discuss topics covered in class. Students will be called on to share their understanding of topics.
2. Assigned homework is to be completed before class. Homework cannot be completed in class unless time is given by the instructor.
3. All students are responsible for their own work.
4. Students should not engage in conversations during class unless it is directly related to the course or material being covered.
5. Turn cell phones and pagers off during class. Vibrating phones or pagers are acceptable unless they disturb the class. No telephone conversations are permitted in the classroom without instructor permission. Cell phones will not be allowed in the classroom during any major examination.

#### ATTENDANCE POLICY

A student who plans to pass this course should also plan to regularly attend all lecture sessions. Students chronically late for class or those with excessive absences may be at risk in passing this course. Each student with a tardy/attendance problem will be addressed on an individual basis with the instructor.

#### GRIEVANCE PROCEDURE

A student who develops a problem with a course policy or the course instructor, should first, try to resolve the problem with the instructor or program director. If the problem cannot be resolved at this level, the student should go to the Division Chairman of Allied Health, the Dean of Instruction, and the college President, in that order.

Bill Young – Office: WCAH 116- Phone: 806-354-6058  
Office hours are posted outside of office.

## COURSE SCHEDULE

CLASS	DATE	TOPIC
1	8/27	Course description, Functional Anatomy of Bronchopulmonary S.
2	8/29	Functional Anatomy of Bronchopulmonary System
3	9/3	<i>Labor Day Holiday</i>
4	9/5	Functional Anatomy of Bronchopulmonary System
5	9/10	Functional Anatomy of Bronchopulmonary System
6	9/12	Functional Anatomy of Bronchopulmonary System
7	9/17	Functional Anatomy of Bronchopulmonary System
8	9/19	Functional Anatomy of Bronchopulmonary System
9	9/24	<b>EXAM #1</b>
10	9/26	Review Exam, Anatomy of the Respiratory System
11	10/1	Anatomy of the Respiratory System
12	10/3	Anatomy of the Respiratory System
13	10/8	Anatomy of the Respiratory System, Mechanical Factors in Breathing
14	10/10	<b>EXAM #2</b>
15	10/15	Review Exam, Muscles of Respiration
16	10/17	Muscles of Respiration
17	10/22	Muscles of Respiration
18	10/24	Lung Volumes and Subdivisions
19	10/29	<b>EXAM #3</b>
20	10/31	Compliance
21	11/5	Compliance
22	11/7	Surface Tension
23	11/12	Surface Tension
24	11/14	Airway Resistance
25	11/19	Airway Resistance
26	11/21	<b>EXAM #4</b>
27	11/26	Alveolar Ventilation
28	11/28	Dead Space
29	12/3	Diffusion
30	12/5	Diffusion
31	12/10	<b>FINAL EXAM (10:30 – 12:30)</b>