

**RCT 1313**  
**Cardiopulmonary Anatomy & Physiology**  
**Fall 2017**

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Instructor: Anthony Brooks	Office Location: Allied Health Bldg
Office Hours: Daily 11:00 a.m. – 12:00 p.m.	Phone: 662-621-4233
Class Time(s)/Sections: MWF 1:00 p.m. – 1:50 p.m.	Email: tbrooks@coahomacc.edu

Course Description:

This course is a study of cardiopulmonary and renal physiology in relation to the practice of respiratory care. (3 sch: 3 hr. lecture)

Textbook(s) and Material(s):

Respiratory Care Anatomy and Physiology, 3<sup>rd</sup> Ed; Will Beachey, Mosby 2007 (ISBN: 978-0-323-07866-5)

Student Learning Outcomes:

**Upon completion of this course, the student will be able to do the following:**

By the end of this course, the student will be proficient in the following:

1. Anatomy of the respiratory system
  - a. Describe and explain the structures that make up the upper airway
  - b. Describe and explain the structures that make up the lower airway
  - c. List and explain the primary functions of the upper airway
  - d. Define the functional unit of the lungs
  - e. Define internal and external respiration
  - f. Describe the mechanics of ventilation
  - g. Describe the structures and functions of the external lung and thorax
  - h. Name and define the lung volumes and capacities
2. Describe the physiology of the respiratory system
  - a. Describe oxygen transport
  - b. Describe carbon dioxide transport
  - c. Explain acid base balance
  - d. Interpret clinical acid base status
  - e. Describe neurological control of ventilation
3. Describe the anatomy and physiology of the cardiovascular system
  - a. Identify the structures and functions of the heart
  - b. Distinguish between the normal and abnormal electrocardiogram
  - c. Describe the major components of blood
  - d. State and assess hemodynamic values
  - e. Identify the structures and functions of the major blood vessels
  - f. Name and explain the major cardiovascular disorders
  - g. Explain the principles of arterial blood sampling

### School Attendance:

Regular class attendance and punctuality are expected. All arrangements for completing missed work are to be made with the instructor. It is the student's responsibility to initiate these arrangements.

Excessive absences may result in loss of credit for the course concerned as well as loss of grant refunds and/or financial aid eligibility.

The nature of the educational programs at Coahoma Community College is such that it is necessary for every student to attend class regularly. Instructors will keep accurate class records, and those records will become part of the student's official record.

NOTE: In the event of inclement weather, the President may cancel classes. Students are advised to listen to the TV or radio for an announcement. Absence without an official closure is treated as an unexcused absence unless there is a danger for the student to drive.

### Respiratory Care Attendance:

The student is expected to attend class 100% of the time. In case of an unavoidable absence, the student is required to submit in writing the requested absence.

**An absence will be handled as follows:** Telephone notification must be made to the Instructor one hour prior to the scheduled class time. The student must speak directly to the Instructor, Program Director, Clinical Director, or secretary. **Leaving messages is not sufficient notification. Failure to follow these instructions will result in immediate disciplinary action according to school and program policy.**

### TARDIES:

A tardy is considered arriving at any time past the designated class time. Proper notification must be made (see attendance policy). If the student is tardy without proper notification, they may be refused entry into class resulting in the student counted absent.

ALL ABSENCES AND TARDIES will result in a grade reduction as follows:

- Three (3) tardies equals 1 absence. Three (3) occurrences of leaving class before the class period is complete equal one (1) absence.
- Greater than 3 absences will result in the student being dropped from the class.

### Absence from Class for School Sanctioned Activities

Students who are absent from class due to participation in an officially sanctioned school activity must present notice of the event to the instructor (at least one week prior is desirable) and request advance assignments. If the student is passing the course, the request for make-up will be honored. If missing the class will endanger the student's academic success, the instructor will notify the activity sponsor; the sponsor and the instructor will determine a decision regarding the student's participation in the activity. In general, the decision will reflect the philosophy that students attend college for educational purposes, and participation in activities outside the classroom is recognized as a lower priority.

## Canvas

**Students are responsible for checking announcements and course postings on the Canvas course sites.**

## Make-up Policy:

**There are no make-up examinations.** Depending on the number of tests, up to 2 grades may be dropped at the end of the semester. With the approval of the Program Director and/or Vice President for Health Sciences, with a valid, written explanation of absence, the Final Exam can be made-up within 5 days of the date the exam is given.

## Cheating Policy/Plagiarism/Academic Misconduct:

Cheating, Plagiarism and Academic Misconduct will not be tolerated. All offenders will be referred to the Vice President for Health Sciences for disciplinary action. Repeated offenses will result in expulsion from the program. Cheating, Plagiarism and Academic Misconduct, includes, but is not limited to, the following:

1. Copying from another student's test paper
2. Using the course textbook or other materials such as a notebook normally brought to a class meeting but not authorized for use during a test by the person giving the test. Having such forbidden material open and in sight of the student will be considered prima facie evidence of use
3. Attempting to commit, or to be an accessory to the commission of, an offense listed above
4. Collaborating during a test with any other person by giving or receiving information without authority
5. Using specially prepared materials, e.g., notes, formula lists, notes written on the student's body or clothing, during a test. Bringing such forbidden material to a test will be considered prima facie evidence of use or attempted use
6. Stealing, buying or otherwise obtaining, all or part of an unadministered test, including answers to an unadministered test
7. Possession/distribution of all or part of an unadministered test
8. Submitting as one's own, in fulfillment of academic requirements, any theme, report, workbook assignment, term paper, essay, other written work, drawing, or other scholastic work prepared totally or in part by another
9. Selling, giving or otherwise supplying to another student for use in fulfilling academic requirements any theme, report, workbook assignment, term paper, or other work
10. Plagiarizing is the unacknowledged inclusion, in work submitted for credit, of someone else's words, ideas, work or data

## Electronic Devices in Class:

The use of cellular phones, pagers, CD players, radios, and similar devices is prohibited in the classroom and laboratory facilities. Cellular phones may not be used as a calculator in class. **All cell phones will be placed on silent (vibrate mode will be turned off) and placed in the designated container at the front of the classroom prior to the beginning of the class period.** Phones may be retrieved at the beginning of a break. However, the above policy will apply again once the break period is completed. If a student is seen with a cell phone during a test, the student's test will be stopped and a zero given for the test.

## **Audio and video recordings of lecture and lab classes are prohibited.**

**Students whose electrical devices disrupt class may be asked to leave class, marked absent and will not be permitted to return for the session. If the electrical device disrupts an exam or quiz, the student will receive a score of zero ("0") for the exam or quiz.**

### Non-Discrimination/Disability Policy:

Coahoma Community College is an equal opportunity institution in accordance with civil rights and does not discriminate on the basis of race, color, national origin, sex, disability, age, or other factors prohibited by law in any of its educational programs, activities and employment opportunities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Michael Houston, Director of Human Resources/Coordinator for 504/ADA, Title IX Compliance Officer, Office #A100, Vivian M. Presley Administration Building, 3240 Friars Point Road, Clarksdale, Mississippi 38614, Phone: (662) 621-4853, Email: [mhouston@coahomacc.edu](mailto:mhouston@coahomacc.edu).

### Instructional Techniques:

- Classroom Lecture
- Demonstration
- Canvas
- Laboratory Practice

### Method(s) of Evaluation:

The student's semester average will come from quizzes, assignments and class room participation. The final average will be assigned a letter grade according to the grading scale listed below:

Quizzes/Assignments/Exams/Tests	70%
Professional Characteristics*	10%
Final Examination (comprehensive)	20%

\*Professional Characteristics includes Attendance, Dress (See Dress Code in Student Program Manual) and classroom participation.

### Grading Scale/System:

In the Respiratory Care Program the grading system is:

- A - Excellent 94 - 100
- B - Good 87 - 93
- C - Average 80 - 86
- F - Failure 79 and below

**NOTE:** Students must have a final grade of 80 in each subject (lecture, lab, and clinical) in order to progress in the Respiratory Care Program.

**NOTE:** The student is responsible for completing Egan's Fundamentals of Respiratory Care Workbook for each chapter utilized from the textbook. **Each student will submit his/her workbook prior to the final exam starting.** Each workbook will be graded for completeness and up to 100 points may be awarded.

**Points to pay particular attention to:**

**I do not offer ANY make-up work. Your exams/quizzes/tests are when they are – not early nor later.**

**If you miss an exam/quiz/test due to: ANY REASON ... you miss the exam/quiz/test and do not have the right to take it at a later date**

**No EXTRA CREDIT is available and after reading this, you will not ask if there is any extra credit available.**

**If you chat in class, I may do any of the following: wait until you are quiet (which will not impact the material we will be scheduled to discuss that class – the student will be responsible for any part we do not cover); request you leave the class and mark you absent. If you are habitually chatting in class, you may be asked to refrain from attending class.**

**The Respiratory Care Technology faculty expects honest behavior from students in relation to written or computerized examinations, quizzes, tests, papers, or any other assignment. The faculty considers sharing testing instruments, past or present, as a violation of academic honesty. Every student and faculty member has the responsibility to promote the highest standards of honesty. Each student in the classroom is on the honor system and is responsible for his/her own actions, as well as others. Any student aware of another student cheating must inform the instructor within twenty four (24) hours.**

*This outline is intended as a guideline for the course. The university/college/institution and the instructor reserve the right to make modifications in content, schedule, and requirements as necessary to enhance each student's educational experience and student learning outcomes.*

**Course Name**  
**TENTATIVE SCHEDULE OF CLASS ASSIGNMENTS/TESTS**

<b>WEEK</b>	<b>ASSIGNMENTS/TESTS</b>	<b>DATE DUE</b>
1	Medical Terminology - Body Structure (Handouts)	Aug 14
2	The Airways, Alveoli, Lungs and Chest wall (Chap 1-2)	Aug 21
3	Ventilation (Chap 3-4)	Aug 28
4	Labor Day School Out, Monday September 4 <sup>th</sup> Ventilation, cont, PFT (Chap 4 – 5)	Sept 4
5	Pulmonary Blood Flow and Gas Diffusion (Chap 6-7)	Sept 11
6	Oxygen and CO <sub>2</sub> Equilibrium and Transport (Chap 8-9)	Sept 18
7	Acid-Base Regulation and Control of Ventilation (Chap 10-11)	Sept 25
8	Midterm Evaluation October 2 <sup>rd</sup> Ventilation-Perfusion and ABGs (Chap 12-13)	Oct 2
9	ABGs, Oxygenation and Lung Protection (Chap 13-14)	Oct 9
10	Fall Break	Oct. 16-17
11	Fetal and Newborn Physiology (Chap 15) Last day to drop course Oct. 16 <sup>th</sup>	Oct 18
12	The Cardiovascular System and Electrophysiology (Chap 16-17)	Oct 23
13	EKGs and Hemodynamics (Chap 18-19) Last day to drop with a "W" Nov. 3 <sup>th</sup>	Oct 30
14	Exercise and Aging, The Renal System, Chapter 20, 21, 22)	Nov 6
15	Renal cont, Electrolytes (Chap 22-23)	Nov 13
16	Thanksgiving Break	Nov 20 – 24
	Semester Review	Nov 27
	Final Exam (Cumulative)	Dec 4-7