

## Course Syllabus

COURSE: RSPT 1240-200 Advanced Cardiopulmonary Anatomy & Physiology  
SEMESTER: Spring 2022  
CLASS LOCATION: Reese Campus – Building 5 Room 513  
CLASS TIMES: 11:00 AM – 11:50 AM  
Monday-Wednesday-Friday  
INSTRUCTOR: Ron Edwards BS, RRT  
OFFICE: Room 514  
OFFICE HOURS: Monday & Wednesday: 2:30 PM – 4:00 PM  
Tuesday & Thursday: 1:30 PM – 4:00 PM  
Other Times by Appointment  
OFFICE PHONE: (806) 716-4625  
E-MAIL: redwards@southplainscollege.edu

*"South Plains College improves each student's life."*

### GENERAL COURSE INFORMATION

#### COURSE DESCRIPTION

This course provides an advanced presentation of anatomy and physiology of the cardiovascular and pulmonary system.

#### STUDENT LEARNING OUTCOMES

Students will:

Describe and explain advanced concepts of cardiopulmonary anatomy and physiology; Describe the neurological control of breathing, ventilation/perfusion concepts, and summarize principles of gas transport.

#### COURSE OBJECTIVES - Outline form (correlated to Scans and Foundations Skills)

1. The student will gain an understanding of the physiology of ventilation, including lung compliance, airway resistance, and time constants, and their associated calculations. (F-1, F-2, F-3, F-4, F-5, F-10, F-11, F-12, F-16, F-17, C-5, C-7, C-8)
2. The student will gain an understanding of the physiology of the pulmonary and systemic vascular systems, and the determinants of cardiac output. (F-1, F-2, F-5, F-10, F-11, F-12, F-16, F-17, C-5, C-7, C-8)
3. The student will gain an understanding of hemodynamic measurements, including the calculation of normally computed values. (F-1, F-2, F-3, F-4, F-5, F-10, F-11, F-12, F-16, F-17, C-5, C-7, C-8)
4. The student will gain an understanding of the various methods by which oxygen is carried in the blood, factors responsible for shifts in the oxyhemoglobin curve, and the calculations involved in oxygen transport studies. (F-1, F-2, F-3, F-4, F-5, F-10, F-11, F-12, F-16, F-17, C-5, C-7, C-8)
5. The student will gain an understanding of the various methods by which carbon dioxide is carried in the blood, and its effects on acid-base balance. (F-1, F-2, F-5, F-10, F-11, F-12, F-16, F-17, C-5, C-7, C-8)
6. The student will gain an understanding of the ventilation-perfusion ratio and the effects respiratory disorders have on it. (F-1, F-2, F-5)
7. The student will gain an understanding of the neuronal control of ventilation. (F-1, F-2, F-5)
8. The student will gain understanding of arterial blood gas interpretation and calculations (F-1, F-

## EVALUATION METHODS

1. Four objective unit examinations will be given, followed by a comprehensive final examination.
2. Students must complete the Assignments and ABG interpretation assignments as outlined in the course syllabus prior to each corresponding unit exam. A grade of 0% will be entered for each assignment not completed. **Late assignments will not be accepted.**
3. An ABG interpretation assignment (TBA)
3. **Make-up exams will not be given.** Students will be allowed to drop their lowest unit exam grade

## ACADEMIC INTEGRITY

It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension.

**Cheating** - Dishonesty of any kind on examinations or on written assignments, illegal possession of examinations, the use of unauthorized notes during an examination, obtaining information during an examination from the textbook or from the examination paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in the office are examples of cheating. Complete honesty is required of the student in the presentation of any and all phases of coursework. This applies to quizzes of whatever length, as well as final examinations, to daily reports and to term papers.

**Plagiarism** - Offering the work of another as one's own, without proper acknowledgment, is plagiarism; therefore, any student who fails to give credit for quotations or essentially identical expression of material taken from books, encyclopedias, magazines and other reference works, or from themes, reports or other writings of a fellow student, is guilty of plagiarism.

## SCANS and FOUNDATION SKILLS

This course completes the following Foundation Skills: F-1, F-2, F-3, F-4, F-5, F-10, F-11, F-12, F-16, F-17. This course completes the following SCANS competencies: C-5, C-7, and C-8. Refer also to Course Objectives. SCANS and Foundation Skills attached.

## VERIFICATION OF WORKPLACE COMPETENCIES – HEALTH OCCUPATIONS DIVISION

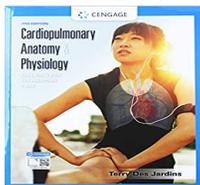
Successful completion of this course is required for the student to be eligible to sit for the Certification Exam for Entry-Level Respiratory Therapists, and to obtain a Texas License to practice Respiratory Care.

## SPECIFIC COURSE INFORMATION

### TEXT AND MATERIALS

Students are required to obtain the following:

1. Cardiopulmonary Anatomy & Physiology Essentials of Respiratory Care, 7<sup>th</sup> Edition, Terry Des Jardins  
ISBN 978133794909



2. Class Notes

## ASSIGNMENT POLICY

1. Students are expected to maintain a reading schedule at home to keep current with classroom discussions.
2. Chapter/unit assignments are due with corresponding test dates. Example: Unit one assignment will be due on unit one test date
3. Basic ABG interpretation assignments are due prior to TEST 2.

**GRADING POLICY** - Grades in this course will be determined using the following criteria:

<b>Exams</b>	<b>45%</b>
<b>Comprehensive Final</b>	<b>25%</b>
<b>Unit Assignments</b>	<b>15%</b>
<b>ABG assignment</b>	<b>15%</b>

A = 90 - 100

B = 80 - 89

C = 75 - 79

D = 65 - 74

F = 0 - 64

Successful completion of this course requires a final grade average of 75 or better.

Students that score less than 80% on their course average should seek remedial help from the instructor on record for specific remediation planning and instructions.

## ATTENDANCE POLICY (Read Carefully)

Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus.

When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students are officially enrolled in all courses for which they pay tuition and fees at the time of registration. Should a student, for any reason, delay in reporting to a class after official enrollment, absences will be attributed to the student from the first-class meeting.

Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X" or "F" as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student's responsibility to be aware of that policy.

It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.

*Regular attendance is necessary to successfully meet the course objectives. The student is responsible for all class work covered during absences from class. Students are expected to be in class and on time. A student is tardy if he/she arrives more than 5 minutes after class begins. If a student is tardy to class three times, it will be counted as one absence. It is the student's responsibility to inform the instructor of the reason for an absence and to do so in a timely fashion. A*

*student may be administratively withdrawn from the course if he/she has more than **five** absences from class and the instructor determines the student is unable to successfully meet the course objectives.*

*Students who are tardy are asked to respect their peers and enter the classroom quietly in order not to disrupt the class. Students who are late to a class starting with an examination will not be given additional time to complete the exam. The exam will be finished when the last on-time student has completed.*

### **ASSIGNMENT POLICY**

1. Students are expected to maintain a reading schedule at home to keep current with classroom discussions.
2. Assignments for each unit **must** be completed prior to the exam for that unit. Each required unit will be graded and averaged will be averaged for the overall assignment grade. Not attempted **assignments will be graded as a zero.**

### **COMPUTER USAGE**

As computer technology in the field of health occupations continues to become more popular, computers will be used in this course for several assignments. All students must have access to computers and printers for printed notes. Students will be expected to utilize computers to access assignments and classroom resources. All registered students are supplied with a working email account from South Plains College. In order to take exams, students may be required to use their username and password.

**ALL STUDENTS ARE EXPECTED TO KNOW THEIR SPC STUDENT USERNAME AND PASSWORD.**

### **COMPUTER LAB USAGE**

The computer lab(s) on any campus may be used by students as assigned by an instructor. Printer paper will not be provided for students to print materials but students may seek assistance from faculty or staff to request lab paper from the college if needed. Lack of computer lab paper is not an excuse for not having homework assignments, skills lab sheets, or any other required documents. Students should come prepared for class.

### **COMMUNICATION POLICY**

Electronic communication between instructor and students in this course will utilize the South Plains College "My SPC" and email systems. The instructor will not initiate communication using private email accounts. Students are encouraged to check SPC email on a regular basis each week of class. Students will also have access to assignments, web-links, handouts, and other vital material which will be delivered via the classroom website. Any student having difficulty accessing the classroom website or their email should immediately contact their instructor for direction. The instructor will work with any student to ensure the student has access to a computer on campus and can obtain the needed class content that is located on the course website.

### **CAMPUS CARRY**

- Students in this class are expected to abide by the standards of student conduct as defined in the SPC Student Campus Concealed Carry - Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the SPC policy at: [http://www.southplainscollege.edu/human\\_resources/policy\\_procedure/hhc.php](http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.php)  
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

### **PREGNANCY ACCOMMODATIONS STATEMENT**

If you are pregnant, or have given birth been within six months, under Title IX you have a right to reasonable accommodations to help continue your education. Students who wish to request accommodations must contact the Health and Wellness Center at 806-716-2529 to initiate the process.

## STUDENT CONDUCT

Rules and regulations relating to the students at South Plains College are made with the view of protecting the best interests of the individual, the general welfare of the entire student body and the educational objectives of the college. As in any segment of society, a college community must be guided by standards that are stringent enough to prevent disorder, yet moderate enough to provide an atmosphere conducive to intellectual and personal development. A high standard of conduct is expected of all students. When a student enrolls at South Plains College, it is assumed that the student accepts the obligations of performance and behavior imposed by the college relevant to its lawful missions, processes and functions. Obedience to the law, respect for properly constituted authority, personal honor, integrity and common sense guide the actions of each member of the college community both in and out of the classroom. Students are subject to federal, state and local laws, as well as South Plains College rules and regulations. A student is not entitled to greater immunities or privileges before the law than those enjoyed by other citizens. Students are subject to such reasonable disciplinary action as the administration of the college may consider appropriate, including suspension and expulsion in appropriate cases for breach of federal, state or local laws, or college rules and regulations. This principle extends to conduct off-campus which is likely to have adverse effects on the college or on the educational process which identifies the offender as an unfit associate for fellow students. Any student who fails to perform according to expected standards may be asked to withdraw. Rules and regulations regarding student conduct appear in the current Student Guide.

The SPC Student Guide can be found at the following link:

<http://catalog.southplainscollege.edu/content.php?catoid=49&navoid=1321>

## COVID-19 STATEMENT

*Consistent with the latest CDC recommendations, we have revised our guidance for students, faculty, and staff who have a known exposure or have tested positive. Anyone with a known exposure should wear a mask for 10 days and should seek a COVID-19 test on day five after exposure. If you test positive or develop symptoms, you should immediately self-isolate and seek a COVID-19 test. **Please immediately notify your instructor, supervisor, and DeEtte Edens, Associate Director of Health and Wellness, any time you test positive for COVID-19.** Anyone who tests positive is required to self-isolate for five days. Following the five-day isolation period, if you are asymptomatic or your symptoms are resolving, you may return to work or class but should wear a mask for five additional days. If you are still symptomatic, please contact DeEtte Edens at [dedens@southplainscollege.edu](mailto:dedens@southplainscollege.edu) or 806-716-2376 prior to your return date.*

## EMERGENCY MESSAGES

The student should notify his/her family that in case of an emergency during normal class schedule, they should call the Nursing Office at (806)716-2391 or (806)716-2193. Class will not be interrupted unless it is an emergency, so they must identify themselves and say it is an emergency to get immediate action.

The student should notify his/her family that in the case of an emergency during clinical rotations, they should call and leave a message or text (who they are and who they need to get in touch with for an emergency) to the number or numbers provided to them in the clinical course syllabus and/or on the clinical course schedule..

## Dropping a class

Students should submit a [Student Initiated Drop Form](#) online.

**Students will not be required to obtain an instructor signature to drop**, however, we do encourage students to communicate with instructors or advisors prior to dropping a course when they are able. **There will be no charge for drops for the fall or spring semesters.**

## Withdrawing from all classes

If a student wishes to withdraw from all courses, they should initiate that process with the Advising Office. They can schedule an appointment with an advisor by visiting <http://www.southplainscollege.edu/admission-aid/advising/spcadvisors.php> or by calling 806-716-2366.

### Schedule Change (after late registration and before census date)

To make a schedule change after late registration (January 22nd) and before the census date (February 3rd), students should submit a [Schedule Change Form](#).

After late registration, adding a class requires instructor approval. If a student is requesting to be added to one of your courses and you approve, please email [registrar@southplainscollege.edu](mailto:registrar@southplainscollege.edu) with your approval. This can take the place of signature on the Schedule Change Form that we have required in the past.

For additional information regarding schedule changes, drops and withdrawals, [click here](#).

### SPECIAL REQUIREMENTS (Read Carefully)

- **Cell Phones** – Cell phones are to be turned OFF or silenced during scheduled class periods unless prior approval has been given from the instructor. This includes text messaging. Cell phones are to be used outside the classroom only. Students are not allowed to have cell phones on their persons during exams.

### CHANGES AND AMENDMENTS TO SYLLABUS

- The program director or the clinical coordinator reserves the right to make reasonable changes to the syllabus at any time during the semester. If this occurs, the students will be notified and furnished a copy of all applicable changes or amendments.

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## COURSE OUTLINE

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### UNIT 1: OXYGEN & CARBON DIOXIDE TRANSPORT

Reading Assignment: Chapter 6

ASSIGNMENT POSTED IN BLACKBOARD: Chapter 6

TEST #1

### UNIT 2: ACID BASE BALANCE & REGULATION

Reading Assignment: Reading Chapter 7

Notes

Assignment: ABGs – Acid Base, Oxygenation Interpretation

TEST #2

### UNIT 3: VENTILATION/PERFUSION RELATIONSHIPS

Reading Assignment: Chapter 8

ASSIGNMENT POSTED IN BLACKBOARD: Chapter 8

TEST #3

### UNIT 4: CONTROL OF VENTILATION

Reading Assignment: Chapter 9

ASSIGNMENT POSTED IN BLACKBOARD: Chapter 9

TEST #4

### UNIT 5: PULMONARY –SYSTEMIC VASCULAR SYSTEM & BASIC HEMODYNAMIC MEASUREMENTS REVIEW

Reading Assignment: Chapter 5 pp. 228-249 & Chapter 15

ASSIGNMENT POSTED IN BLACKBOARD: Chapter pp. 228-249 & Chapter 15

**Unit 5 material will be assessed on the Final Exam**

### COMPREHENSIVE FINAL EXAM

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## ACCOMMODATIONS

### DIVERSITY STATEMENT

In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

### PREGNANCY ACCOMMODATIONS STATEMENT

If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations, you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact Chrystal Gilster, Director of Health and Wellness at 806-716-2362 or email , [cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu)

### DISABILITIES STATEMENT

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland Student Health & Wellness Center 806-716-2577, Reese Center (also covers ATC) Building 8: 806-716-4675, Plainview Center Main Office: 806-716-4302 or 806-296-9611, or the Health and Wellness main number at 806-716-2529.

## FOUNDATION SKILLS

### BASIC SKILLS—Reads, Writes, Performs Arithmetic and Mathematical Operations, Listens and Speaks

- F-1 Reading—locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
- F-2 Writing—communicates thoughts, ideas, information and messages in writing and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
- F-3 Arithmetic—performs basic computations; uses basic numerical concepts such as whole numbers, etc.
- F-4 Mathematics—approaches practical problems by choosing appropriately from a variety of mathematical techniques.
- F-5 Listening—receives, attends to, interprets, and responds to verbal messages and other cues.
- F-6 Speaking—organizes ideas and communicates orally.

### THINKING SKILLS—Thinks Creatively, Makes Decisions, Solves Problems, Visualizes and Knows How to Learn and Reason

- F-7 Creative Thinking—generates new ideas.
- F-8 Decision-Making—specifies goals and constraints, generates alternatives, considers risks, evaluates and chooses best alternative.
- F-9 Problem Solving—recognizes problems, devises and implements plan of action.
- F-10 Seeing Things in the Mind's Eye—organizes and processes symbols, pictures, graphs, objects, and other information.
- F-11 Knowing How to Learn—uses efficient learning techniques to acquire and apply new knowledge and skills.
- F-12 Reasoning—discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

### PERSONAL QUALITIES—Displays Responsibility, Self-Esteem, Sociability, Self-Management, Integrity and Honesty

- F-13 Responsibility—exerts a high level of effort and perseveres towards goal attainment.
- F-14 Self-Esteem—believes in own self-worth and maintains a positive view of self.

F-15 Sociability—demonstrates understanding, friendliness, adaptability, empathy and politeness in group settings.

F-16 Self-Management—assesses self accurately, sets personal goals, monitors progress and exhibits self-control.

F-17 Integrity/Honesty—chooses ethical courses of action.

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## SCANS COMPETENCIES

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C-1 **TIME** - Selects goal - relevant activities, ranks them, allocates time, prepares and follows schedules.

C-2 **MONEY** - Uses or prepares budgets, makes forecasts, keeps records and makes adjustments to meet objectives.

C-3 **MATERIALS AND FACILITIES** - Acquires, stores, allocates, and uses materials or space efficiently.

C-4 **HUMAN RESOURCES** - Assesses skills and distributes work accordingly, evaluates performances and provides feedback.

### **INFORMATION - Acquires and Uses Information**

C-5 Acquires and evaluates information.

C-6 Organizes and maintains information.

C-7 Interprets and communicates information.

C-8 Uses computers to process information.

### **INTERPERSONAL—Works With Others**

C-9 Participates as member of a team and contributes to group effort.

C-10 Teaches others new skills.

C-11 Serves Clients/Customers—works to satisfy customer’s expectations.

C-12 Exercises Leadership—communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.

C-13 Negotiates—works toward agreements involving exchanges of resources; resolves divergent interests.

C-14 Works With Diversity—works well with men and women from diverse backgrounds.

### **SYSTEMS—Understands Complex Interrelationships**

C-15 Understands Systems—knows how social, organizational, and technological systems work and operates effectively with them.

C-16 Monitors and Corrects Performance—distinguishes trends, predicts impacts on system operations, diagnoses systems performance and corrects malfunctions.

C-17 Improves or Designs Systems—suggests modifications to existing systems and develops new or alternative systems to improve performance.

### **TECHNOLOGY—Works with a Variety of Technologies**

C-18 Selects Technology—chooses procedures, tools, or equipment, including computers and related technologies.

C-19 Applies Technology to Task—understands overall intent and proper procedures for setup and operation of equipment.

C-20 Maintains and Troubleshoots Equipment—prevents, identifies, or solves problems with equipment, including computers and other technologies.

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January 2022



**COURSE AGREEMENT RSPT 1240-200**

**Spring 2022**

I have received a copy of the course syllabus for RSPT 1240-200. I have reviewed the syllabus, and understand the course format, course competencies, attendance policy, and examination system. I further understand my responsibilities and rights, as explained by the instructor and listed in the syllabus, and agree to all course requirements as stated in the course syllabus.

Student's Name (print)

\_\_\_\_\_

Student's Signature

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Date\_\_\_\_\_