

Course Syllabus

COURSE: RSPT 1325-200 Respiratory Care Sciences
SEMESTER: Spring 2023
CLASS LOCATION: Reese Campus – Building 5 Room 513
CLASS TIMES: 1:30 PM – 3:00 PM
Monday-Wednesday
INSTRUCTOR: Ron Edwards, BS, RRT
OFFICE: Room 514
OFFICE HOURS: Tuesday & Thursday: 2:00 PM – 4:00 PM
Friday: 8:00 AM - Noon
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 is a study of physics, mathematics, and chemistry as related to respiratory care.

STUDENT LEARNING OUTCOMES

Students will:
1. Apply basic mathematic concepts related to respiratory care.
2. Apply concepts of chemistry related to respiratory care.
3. Apply concepts of physics related to respiratory care.
4. Apply basic microbiology concepts related to respiratory care

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

1. The student will perform basic computations to calculate the answers to basic chemistry, physics, and statistics problems. (F-3)
2. The student will approach practical respiratory chemistry, physics, and statistics problems by choosing appropriately from a variety of mathematical techniques. (F-4)
3. The student will understand the theory of gas laws, and exhibit this by recognizing problems in alterations of temperature, pressure, and volume, and devising a plan of action by calculating expected changes. (F-9)
4. The student will recognize quality control problems in the blood gas laboratory, and devise a plan of action to solve those problems. (F-8, F-9, C-5, C-6, C-7, C-16, C-20)
5. The student will utilize symbols, pictures, and graphs to aid in the discussion of respiratory science principles. (F-10)
6. The student will discuss the atomic structure and electron configuration. (F-10)

EVALUATION METHODS

1. Four unit examinations will be given during the semester, followed by a comprehensive final examination. Make-up exams will not be given. Students will be allowed to drop their lowest unit exam grade.
2. A comprehensive final examination will be given.
3. Pop quizzes may be given in class.
4. Homework may be assigned during the semester.

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, daily reports, and 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.

BLACKBOARD

- **Blackboard is an e-Education platform designed to enable educational innovations everywhere by connecting people and technology. This educational tool will be used in this course throughout the semester.**

FACEBOOK

- The Respiratory Care Program has a Facebook page at <http://www.facebook.com/SouthPlainsCollegeRespiratoryCare>.
- In addition to the South Plains College website, this Facebook page will be used to keep students up-to-date on program activities, weather delays, and South Plains College announcements and will help with program recruitment. "Liking" the South Plains College Respiratory Care Facebook page is not mandatory, nor are personal Facebook accounts, in order to access this page.

SCANS and FOUNDATION SKILLS

This course completes the following Foundation Skills: F-3, F-4, F-8, F-9, F-10, and F-12. This course completes SCANS competencies: C-5, C-6, C-7, C-16, and C-20. Refer also to Course Objectives. SCANS and Foundation Skills are 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 Therapists.

SPECIFIC COURSE INFORMATION

TEXT AND MATERIALS

1. Wojciechowski, William. Respiratory Care Sciences: An Integrated Approach, 5th Ed., (2015). New York, Delmar Publishers Inc. (**optional**)
2. Class Notes

ASSIGNMENT POLICY

1. Students are expected to maintain a study schedule at home to keep current with classroom discussions.
2. **Four assignments may be given to allow students to practice mathematical calculations and concepts prior to the examinations. Assignments are due at the time of that unit exam. No late assignments will be accepted.**
3. For students that score less than 80% on their course average, it is highly recommended to attend study lab until the student's course average is 80% or higher for the course. The student can schedule an appointment with the instructor of record for specific remediation instructions which may include exam review, assignment, and relevant course work review.

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

Unit Exams	60%
Homework Assignments/Pop Quizzes	20%
Comprehensive Final Exam	20%

A = 90 - 100

B = 80 - 89

C = 75 - 79

F = 0 - 74

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 **four 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 it

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
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

If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or test for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376. Proof of a positive test is required. A home test is sufficient but students must submit a photo of the positive result. The date of test must be written on the test result and an ID included in the photo. If tested elsewhere (clinic, pharmacy, etc.), please submit a copy of the doctor's note or email notification. Results may be emailed to DeEtte Edens, BSN, RN at dedens@southplainscollege.edu.

A student is clear to return to class without further assessment from DeEtte Edens, BSN, RN if they have completed the 5-day isolation period, symptoms have improved, and they are without fever for 24 hours without the use of fever-reducing medication.

EMERGENCY MESSAGES

The student should notify his/her family that in case of an emergency during the normal class schedule, they should call the Nursing Office at (806)716-2391 or (806)716-2193. The 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.

DROPPING A CLASS

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

Students will not be required to obtain the instructor's 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](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 20th) and before the census date (January 26th), 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 with your approval. This can take the place of signature on the Schedule Change Form that we have required in the past.

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.

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 THE 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 with a copy of all applicable changes or amendments.

COURSE OUTLINE

Unit 1: PHYSIOLOGIC CHEMISTRY

Reading Assignment: Respiratory Care Sciences Ch. 5
Notes
Test #1

Unit 2: PHYSICS, PART I

Reading Assignment: Respiratory Care Sciences Ch. 4
Notes
Homework Assignment
Test #2

Unit 3: PHYSICS, PART II

Reading Assignment: Respiratory Care Sciences Ch.4
Notes
Homework Assignment
Test #3

Unit 4: Basic Medical Microbiology

Notes
Homework Assignment
Test #4

Unit 5: Blood Gas QC and Statistics

Notes
Homework Assignment
Unit 5 Material will be assessed on the Final

COMPREHENSIVE FINAL EXAMINATION

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, 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, a 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

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.

NON-DISCRIMINATION STATEMENT

South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

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.

SCANS COMPETENCIES

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 the information.

C-7 Interprets and communicates information.

C-8 Uses computers to process information.

INTERPERSONAL—Works with Others

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

C-10 Teaches others new skills.

C-11 Serves Clients/Customers—works to satisfy customers' expectations.

C-12 Exercises Leadership—communicates ideas to justify position, persuades and convinces others, and 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 operate 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.



Course Agreement RSPT 1325.200
Spring 2023

I have received a copy of the course syllabus. I have reviewed the syllabus thoroughly, and understand the course format, attendance and tardy policies, and examination system. I further understand my responsibilities and rights, as explained by the instructor and listed also in the syllabus, and agree to all course requirements as stated in the syllabus.

Student's Name (print)

Student's Signature

Date _____