

## Course Syllabus

COURSE: RSPT 1429.200 Respiratory Care Fundamentals I  
SEMESTER: Fall 2015  
CLASS TIMES: 11:00 AM – 1:10 PM  
Monday-Wednesday-Friday  
INSTRUCTOR: Krista Young, BS, RRT-NPS  
OFFICE: 520  
OFFICE HOURS: Monday & Wednesday: 1:30 PM-3:00 PM  
Tuesday & Thursday: 11:00 AM-12:00 PM  
1:30 PM-3:00 PM  
Friday: 9:00 AM- 11:00 AM  
Other Times By Appointment  
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*"South Plains College improves each student's life."*

### GENERAL COURSE INFORMATION

#### COURSE DESCRIPTION

This course provides a foundation for the development of knowledge and skills for respiratory care, including history, medical terminology/symbols, medical/legal, infection control, vital signs, physical assessment, medical gas therapy, oxygen analyzers, and humidity/aerosol therapy.

#### END OF COURSE OUTCOMES

Utilize data related to patient assessment; prepare equipment for function, operation, and cleanliness; perform infection control, vital signs, physical assessment, medical gas therapy, and humidity/aerosol therapy; identify equipment malfunctions and maintain patient records.

#### COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES- Outline form (Correlated to Scans and Foundations Skills)

- I. Demonstrate an understanding of respiratory history and medical terms/symbols. (F1, 2, 5, 6)
- II. The student will recognize the four classic vital signs and techniques for their measurement, explain the value of monitoring their trends, recognize normal values, and list common causes of deviation from normal in adults. (F-1, 2, 3, 5, 6, 9, 12, C-5, 6, 7, 18, 19)
- III. The student will recognize the four components of the physical exam, describe the correct methods for obtaining physical information, recognize the significance of abnormal assessments, and correctly use a stethoscope. (F-1, 2, 5, 6, 9, 12, C-5, 6, 7, 18, 19)
- IV. The student will describe what constitutes a medical record, explain the legal and practical obligations involved in recordkeeping, and explain the method of maintaining a problem-oriented medical record. (F-1, 2, 5, 6, C-6, 7, 8, 9, C-18, 19)
- V. Describe production and storage of medical gases and the devices used to control their delivery in the clinical setting. (F1, 3, 8, C19)
  - A. Differentiate between gases and gas mixtures that are used clinically as well as explaining their production methods
  - B. Explain the differences that exist between gaseous and liquid storage methods
  - C. Determine the contents of both compressed gas and liquid cylinders
  - D. Compute the duration of flow for compressed and liquid gas therapy
  - E. Describe proper storage, transport and use of compressed gas cylinders

- F. Differentiate between gas supply systems
  - G. Explain the procedure to follow if a bulk oxygen delivery system fails
  - H. Identify and explain which safety systems apply to various equipment connections
  - I. Select proper devices to regulate gas pressure and control flow and explain the function of each
  - J. Assemble, check for proper function and identify malfunctions in gas delivery equipment
  - K. Correct common malfunctions of gas delivery equipment
- VI. Determine desired goals of gas therapy, select the proper mode of administration, monitor patient response, and recommend changes in the prescribe therapy (F1, 2, 3, 5, 6, 8, 9, 12, C7, 18, 19, 20)
- A. Differentiate between hypoxia and hypoxemia
  - B. Identify when use of oxygen therapy is appropriate
  - C. Assess the need for oxygen therapy
  - D. Describe the complications associated with oxygen therapy
  - E. Select correct oxygen delivery system appropriate for the respiratory care plan
  - F. Check for proper function, identify and correct malfunctions of oxygen delivery systems
  - G. Evaluate and monitor a patient's response to oxygen therapy
  - H. Modify or recommend modification of oxygen therapy on the basis of patient response
- VII. Describe the principles of humidity and bland aerosol therapy (F1, 2, 3, 5, 6, 8, 9, 12, C7,18,19,20)
- A. Describe the effect dry gases have on the respiratory tract
  - B. Identify when and how to humidify and warm inspired gases
  - C. Explain the general performance of different humidifiers and feed systems
  - D. Discuss methods to enhance humidifier performance
  - E. Describe how to monitor patients receiving humidity therapy
  - F. Identify and resolve common problems with humidification systems
  - G. Understand when to apply bland aerosol therapy
  - H. Identify and explain how delivery systems for bland aerosol therapy function
  - I. Identify and resolve common problems with aerosol delivery systems
  - J. Explain how to perform sputum induction
  - K. Select or recommend the appropriate therapy to condition a patient's inspired air
- VIII. Explain the principles of aerosol drug therapy (F1, 2, 3, 5, 6, 8, 9, 12, C7, 18, 19, 20)
- A. Describe what characterizes an aerosol
  - B. Describe how particle size, motion and airway characteristics affect aerosol deposition
  - C. Explain how aerosols are generated
  - D. Identify hazards associated with aerosol drug therapy
  - E. Select the best aerosol drug delivery system for a given patient
  - F. Initiate and modify aerosol drug therapy
  - G. Describe the technique used to teach a patient to properly self-administer drug aerosol therapy
  - H. Assess patients' response to bronchodilator therapy at the point of care
  - I. Apply aerosol therapy in certain circumstances
  - J. Protect patient and caregivers from exposure to aerosolized drugs
- IX. Demonstrate an understanding of infection control (F1, 2, 3, 5, 6, 8, 9, 12, C7, 18, 19, 20)
- A. Recognize and evaluate the ways that infections are spread
  - B. Identify source, transmission route, and host as necessary to the spread of infection
  - C. Identify and explain rationale for decreasing host susceptibility
  - D. Identify and explain rationale for eliminating source of pathogens
  - E. Identify and explain rationale for interruption of the route of transmission
  - F. Recall and explain differences between cleaning, disinfection and sterilization
  - G. Recall and explain different procedures of infection control for various types of equipment
  - H. Recall and explain rationale for different measures of barriers and isolation precautions
  - I. Recall and explain rationale for different measures of surveillance and monitoring of equipment processing quality control, sampling of in-use equipment and microbiological identification

## 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-6, F-8, F-9, F-10, F-12, and F-17. This course completes the following SCANS competencies: C-5, C-7, C-8, C-9, C-18, C-19, and C-20. Refer also to Course Objectives. SCANS and Foundation Skills attached

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.

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## SPECIFIC COURSE INFORMATION

### TEXT AND MATERIALS

1. Cairo, J.M., & Pilbeam, S.P. Mosby's Respiratory Care Equipment, 9<sup>th</sup> Ed., (2013)
2. Kacmarek, Robert M. Egan's Fundamentals of Respiratory Care, 10<sup>th</sup> Ed.,(2013)
3. Wilkins, Robert L. Clinical Assessment in Respiratory Care, 7<sup>th</sup> Ed., (2013)
4. Data Arc license

### EVALUATION METHODS

1. Unit Examinations
2. Assignments
3. Lab Competencies
4. Final Examination

### ATTENDANCE POLICY

Regular attendance in RSPT 1429 is necessary to gain proficiency in respiratory care procedures. The student is required to make up any class work missed due to an absence. Please refer to the South Plains College General Catalog (2015-2016) for specific policies on classroom attendance. The advantages of attending every class and reading the text cannot be overemphasized.

### ASSIGNMENT POLICY

Students are expected to maintain a reading schedule at home to keep current with classroom discussions. Late assignments will not be accepted.

1. Workbook Assignments: Details of workbook assignments will be posted on Blackboard.

## LAB COMPETENCIES

1. Students must complete laboratory exercises during lab time, individually or in small groups, as assigned. Laboratory exercises and skills practice allow the student to apply the reading and lecture material to actual performance of skills.
2. Students will be required to successfully complete the following competencies in lab:

Chest Assessment	Dry Powder inhaler
Vital Signs	Partial/non-rebreather mask
Adult Face Mask	Transport with oxygen
Nasal Cannula	Small volume nebulizer
Simple mask	Metered dose inhaler
Air entrainment mask	Peak Flow

All competencies MUST be documented in DataArc by the clinical instructor/preceptor evaluating the student. The student will be evaluated as:

**-Satisfactory (100%)**- ready for clinical application with minimal supervision. Performed procedure accurately, or was able to correct performance without injury to the patient or decreasing effect of therapy being given.

**-Unsatisfactory performance** - not ready for clinical application. Requires remediation under one of the following categories:

- **Minor – Unsatisfactory (75%):** Needs to review fundamental concepts or requires re-evaluation of minor deficiency(s) (ex. forgets to wash hands during the **Follow-up** stage. Must be re-evaluated on this step not the whole procedure).
- **Major – Unsatisfactory (50%):** Requires additional lab practice and complete re-evaluation of the procedure.
- If the student receives an unsatisfactory rating (either minor or major), the student may attempt the competency on another laboratory day when he/she has reviewed the procedure and feels prepared. If the student does not successfully complete the competency after the 3<sup>rd</sup> try, he/she must schedule a conference with the DCE before attempting the competency again.
- Each competency attempt will be scored (as indicated above). Ex: If a student scores a 75% on the first attempt and then a 100% on second attempt, the score entered into the grade book is 87.5 for that particular competency.
- The student is not considered proficient in a lab competency until a satisfactory rating has been achieved.

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

Assignments	10%
Lab Competencies	5%
Unit Exams	60%
Comprehensive Final	25%

A = 90 - 100  
B = 80 - 89  
C = 75 - 79  
F = < 75%

Students will be allowed to drop their lowest unit exam grade. Make-up exams will not be given.

Successful completion of this course requires: A final grade of 'C' (75%) or better.

## COMMUNICATION POLICY

Electronic communication between instructor and students in this course will utilize the South Plains College “My SPC” and email systems. Instructor will not initiate communication using private email accounts. Students are encouraged to check SPC email on a regular basis.

If necessary, students may contact me on my personal cell phone between the hours 8:00 am-8:30 pm M-F. On the weekends/holidays, please do not contact me before 10:00 am and after 6:00 pm. If you need to reach me after the hours listed, please send an email to my SPC email. If you will be absent from class, please do not contact me on my cell phone.

The Respiratory Care Program has a Facebook page at <https://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, South Plains College announcements and will help with program recruitment. “Liking” the Respiratory Care Program Facebook page is not mandatory, nor is personal Facebook accounts, in order to access this page.

## STUDENT CONDUCT

Students in this class are expected to abide by the standards of student conduct as defined in the SPC Student Guide pages 13-17.

## CELL PHONE, PAGERS, and OTHER ELECTRONIC DEVICES

Cell phones distract from the learning environment. For this reason, they should be turned off and put away out of view upon entering the classroom. If you must carry a pager or phone to class for emergency purposes, please see me in advance. If you bring a laptop to class, it should not be used for purposes other than taking notes in class. You may not record lectures in this class.

## CLASSROOM ETIQUETTE

Talking incessantly with your neighbor during lectures is not acceptable behavior. If you repeatedly talk in class, I will ask you to leave the room. Please do not leave once class begins to get a snack, get a drink, or any other activity.

## CHANGES and AMENDMENTS TO SYLLABUS

The program director or 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

### Unit 1 History of the Profession/Professional Organizations/Ethical and Legal Implications

#### Introduction to Medical Terminology

Reading Assignment: Kacmarek, Chapter 1 & 5

#### Exam 1

### Unit 2 Vital Signs and Basic Physical Assessment

Reading Assignment: Wilkins, Chapters 4 & 5

Competencies: Vital Signs, chest assessment

#### Exam 2

### **Unit 3 Medical Gases: Manufacture, Storage, Delivery**

Reading Assignment: Cairo- Chapter 3  
Kacmarek- Chapter 37  
Workbook assignment as posted on Blackboard

Competencies: Transport with oxygen

#### **Exam 3**

### **Unit 4 Oxygen Therapy**

Reading Assignment: Kacmarek- Chapter 38  
Cairo-Chapter 4  
Workbook assignment as posted on Blackboard

Competencies: Nasal Cannula, air entrainment mask, partial/non-rebreather mask

#### **Exam 4**

### **Unit 5 Humidity and Bland Aerosol Therapy**

Reading Assignment: Kacmarek- Chapter 35  
Cairo- Chapter 6  
Workbook assignment as posted on Blackboard

Lab Competencies: Adult face mask

#### **Exam 5**

### **Unit 6 Aerosol Drug Therapy**

Reading Assignment: Kacmarek- Chapter 36  
Cairo- Chapter 6  
Workbook assignment as posted on Blackboard

Lab Competencies: Small volume nebulizer, metered dose inhaler, dry powder inhaler

#### **Exam 6**

### **Unit 7 Infection Control**

Reading Assignment: Kacmarek- Chapter 4  
Cairo- Chapter 2

#### **Exam 7**

### **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.

## **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. For more information, call or visit the Disability Services Office at, Reese Center Building 8, 806-716-4675.

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## **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 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.





**RESPIRATORY CARE PROGRAM  
RSPT 1429  
COURSE AGREEMENT**

I have received a copy of the course syllabus for RSPT 1429. 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.

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Printed Name

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Signature

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Date