Master Syllabus
Respiratory Care Procedures I
RSPT 1410
Lecture/Lab

Course Description:
Essential knowledge of the equipment and techniques used in the treatment of cardiopulmonary disease.

End-of-Course-Outcomes:
Utilize respiratory care equipment; perform therapeutic procedures including oxygen therapy, humidity and aerosol therapy, lung expansion therapy, bronchial hygiene therapy, and pulse oximetry; recommend modification of therapy; and maintain patient records

Textbooks
Egan's Fundamentals of Respiratory Care, 12th ed., Robert M. Kacmarek, James K Stoller, Al Heuer.

Disclaimer
The instructor reserves the right to make modifications to this course throughout the semester.

Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically related activity will be reported as never attended and dropped from the course.

Course Objectives and Student Learning Outcomes

I. Describe production and storage of medical gases and the devices used to control their delivery in the clinical setting.
   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

II. Determine desired goals of gas therapy, select the proper mode of administration, monitor patient response, and recommend changes in the prescribe therapy
   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
I. List indications, complications and hazards that apply to hyperbaric oxygen therapy
J. Identify appropriate situations for the use of nitric oxide therapy
K. Identify appropriate situation and administration of helium-oxygen therapy.

III. Describe the principles of humidity and bland aerosol therapy
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 indications, contraindications and hazards pertaining to humidification during mechanical ventilation
F. Describe how to monitor patients receiving humidity therapy
G. Identify and resolve common problems with humidification systems
H. Understand when to apply bland aerosol therapy
I. Identify and explain how delivery systems for bland aerosol therapy function
J. Identify and resolve common problems with aerosol delivery systems
K. Explain how to perform sputum induction
L. Select or recommend the appropriate therapy to condition a patient's inspired air

IV. Explain the principles of aerosol drug therapy
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

V. Describe physiologic effects, goals, hazards, and techniques of lung inflation therapy
A. Identify the common types of atelectasis and list their causes
B. Identify patients that would benefit from lung expansion therapy
C. Describe clinical findings seen in atelectasis
D. Explain how lung expansion therapy works
E. List indications, hazards and complications associated with the various modes of lung expansion therapy
F. Describe the function of the equipment utilized to treat atelectasis

G. List the primary responsibilities of the respiratory care practitioner in planning, implementing, and evaluating lung expansion therapy

VI. Demonstrate an understanding of the indications, rationale, contraindications, and techniques for bronchial hygiene therapy

A. Describe how normal airway clearance mechanisms work and what can impair their function
B. Describe diseases associated with abnormal clearance of secretions
C. List goals and indications that apply to bronchial hygiene therapy
D. Assess the need for bronchial hygiene therapy
E. Select and perform various bronchial hygiene techniques including
    1. Postural drainage, percussion and vibration
    2. Directed coughing and related expulsion techniques
    3. PEP therapy
    4. High-frequency compression/oscillation methods
    5. Mobilization and exercise
F. Monitor and evaluate a patient's response to bronchial hygiene therapy
G. Modify bronchial hygiene therapies on the basis of patient response

Student Contributions and Class Policies

Each student will spend at least 4 hours per week preparing for class. Attendance is critical in this class. The college attendance policy will be followed.

Class Policies

All classroom performance and behavior will be considered academic.

Evaluation Method

Exams	**50%**

- Exam 1 (Course Objective I)
- Exam 2 (Course Objective II)
- Exam 3 (Course Objective III)
- Exam 4 (Course Objective IV)
- Exam 5 (Course Objective V)

6 Quizzes	**10%**

- Quiz 1 (Course Objective I)
- Quiz 2 (Course Objective II)
- Quiz 3 (Course Objective III)
- Quiz 4 (Course Objective IV)
- Quiz 5 (Course Objective V)
- Quiz 6 (Course Objective VI)

Attendance:	**5%**

Laboratory exercises and competencies:	**15%**

- Cylinder Transport (Course Objective I)
- Oxygen Therapy (Course Objective II)
- Bland Aerosol Therapy (Course Objective III)
- Small Volume Nebulizer (Course Objective IV)
- Incentive Spirometry (Course Objective V)
- CPT Competency (Course Objective VI)

The above competencies must have three “Assisted” or “Performed” documented in Trajecsys, prior to the instructor evaluation for competency. During the instructor evaluation the student must satisfactorily PASS the competency evaluation items, including core components. At that time APPROVE will be documented in Trajecsys and the student will receive a 100% for the competency evaluation. If the student does not satisfactorily PASS the competency evaluation items, including core components, the competency will be documented as NOT APPROVED in Trajecsys, the student will receive a 50% for that attempt, and may have one attempt at re-evaluation after approved remediation. Upon re-evaluation, the student must satisfactorily PASS the competency evaluation items, including core components; however an average of the two attempts (75%) will be recorded in the grade book. If the student is unsuccessful on the re-evaluation, they will be removed from the course.

Final Exam (Course Objective I-VI)	**20%**

A written final examination will be administered during the scheduled finals week. It will be comprehensive for the entire semester classes.

Each student is expected to take exams as scheduled. If an exam is missed for any reason, the student must take the exam on the student’s first day back on campus or a

grade of “0” will be recorded for the missed exam. Ten percent will automatically be deducted from the make-up exam score. No more than two exams per semester may be made-up (for each course). Exams may not be taken early in any class.

Final exams must be taken at the scheduled time without exception.

All final exams must be taken to proceed within the respiratory care program.

Grading Standards:

A	**90-100%**
B	**80-89%**
C	**70-79%**
D	**<70%**

Attendance:
Your attendance is the biggest predictor of your success. Attendance at every class is expected. Attendance will count for 5% of the final grade.

Advising
Any student that scores below a 70 on an exam is responsible for emailing the instructor and scheduling an advising session within 24 hours of the exam review.

Class Policies
All classroom performance and behavior will be considered academic.

Make Up exam Policy
Each student is expected to take exams as scheduled. If an exam is missed for any reason, the student must take the exam on the student’s first day back on campus or a grade of “0” will be recorded for the missed exam. Ten percent will automatically be deducted from the make-up exam score. No more than two exams per semester may be made-up (for each course). Exams may not be taken early in any class.

All personal communication devices are to be placed on silence/vibrate during class time. If you must answer your device, please leave the immediate area.

No personal communication devices allowed in testing areas.

Scholastic Dishonesty and Academic Misconduct
The Midland College Policy will be followed.

Division Information:
Division Chairman: Miranda Poage, PhD
Division Office Location and Telephone: 208, 685-4600

Students are encouraged to contact the instructor at any time; however, making an appointment will guarantee the instructor's availability at a specific time.

Licensure Eligibility Notification
Completion of Midland College degrees and/or certificates does not guarantee eligibility to take a certification/registry/licensure examination. The eligibility of each person is determined on an individual basis by the regulatory body of the specific discipline. If you have a conviction of a crime other than a minor traffic violation, physical or mental disability/illness, hospitalization/treatment for chemical dependency within the past five years, current intemperate use of drugs or alcohol or a previous denial of a licensure or action by a licensing authority, you will need to contact the specific regulatory body for an individual ruling. Some programs require a criminal background check and urine and drug screen.

AMERICANS WITH DISABILITIES ACT (ADA) Statement:
Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit www.midland.edu/accommodation and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.

NON-DISCRIMINATION STATEMENT:
Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its program and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies:
Wendy A. Kane
Dean of Student Life
Midland College
Title IX Coordinator/Compliance Officer
3600 N. Garfield, SSC 131
Midland, TX 79705
(432) 685-4781
Title9@midland.edu

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.