



# **INSTRUCTIONAL PACKAGE**

RES 121  
Respiratory Skills I

Effective Term  
Fall 2023

# INSTRUCTIONAL PACKAGE

## Part I: Course Information

Effective Term: Fall 2023/Spring 2024/Summer 2024

COURSE PREFIX: RES 121

COURSE TITLE: Respiratory Skills I

CONTACT HOURS: 3 Lec/3 Lab

CREDIT HOURS: 4

### **RATIONALE FOR THE COURSE:**

RES 121 course provides students with the ability to identify the goals indications, contraindications, and hazards for oxygen, humidity, medication aerosols, and lung inflation devices. As a student you will learn how to administer safe and effective respiratory procedures for oxygen, humidity, medication aerosols, and lung inflation therapies. Students will calculate tank durations, air to oxygen ratios, patient gas flow demands, oxygen, and acid-base balances.

### **COURSE DESCRIPTION:**

This course includes a study of basic respiratory therapy procedures and their administration.

### **PREREQUISITES/CO-REQUISITES:**

General Education courses BIO 210, 211, 225, MAT 120, ENG 101, PSY 201, and HUM.

Admission to the Respiratory Care Program. Required prerequisite courses must be completed with a grade of "C" or better.

### **REQUIRED MATERIALS:**

Please visit the [BOOKSTORE](#) online site for most current textbook information.

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

Kacmarek, R.M., Stoller, J.K., & Heuer, A.H. (2021). Egan's Fundamentals of Respiratory Care (12th ed). St. Louis, MO: Elsevier/Mosby. ISBN: 9780323811217

Kacmarek, R.M., Stoller, J.K., & Heuer, A.H. (2021). Workbook for Egan's Fundamentals of Respiratory Care (12th ed). St. Louis, MO: Elsevier/Mosby. ISBN: 9780323553667

### **ADDITIONAL REQUIREMENTS:**

2023-2024

Stethoscope, finger pulse oximeter, blood pressure cuff, and pocket calculator.

### **TECHNICAL REQUIREMENTS:**

Access to Desire2Learn (D2L), HGTC's learning management system (LMS) used for course materials.

Access to myHGTC portal for student self-services.

College email access – this is the college's primary official form of communication.

### **CLASSROOM ETIQUETTE:**

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

**NETIQUETTE:** is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit [Online Netiquette](#).

## **Part II: Student Learning Outcomes**

### **COURSE LEARNING OUTCOMES and ASSESSMENTS\*:**

1. Recall in writing and verbally the factors relating to the goals, indications, and contraindications, and hazards of the following therapies: oxygen, humidity, medication aerosol, and lung inflation. (Cognitive-Knowledge)
2. Demonstrate in a safe and effective manner the following respiratory procedures: oxygen therapy, humidity/medication aerosol therapy, lung inflation therapy and basic life support. (Psychomotor-Skills) & (Affective-Behavior)
3. Perform mathematical calculations to evaluate tank duration, air to oxygen ratios, patient gas flow demand, oxygenation and acid base balance.

***\*Students – please refer to the Instructor's Course Information sheet for specific information on assessments and due dates.***

### Module 1

#### Material Covered:

- Medical Gas Therapy
- Basic Lab Data
- O<sub>2</sub> Analyzer Lab

#### Assessments:

- Homework
- Discussion Post
- Case Study
- Skill Check Assessment/Laboratory Competency

- Unit Test

## Learning Outcomes:

1. Describe in writing and verbally the factors relating to the goals, indications, contraindications and hazards of Oxygen therapy.
2. Identifies partial pressure and oxygen saturation level that defines hypoxemia
3. Identifies additional clinical indications for oxygen therapy
4. Identifies potential complications
5. Explains difference between high flow and low flow system
6. Identifies approximate oxygen percentages, air entrainment ratios, and total flow delivered with oxygen therapy, heliox and Nitric Oxide
7. Demonstrate in a safe and effective manner delivery of low flow and high flow oxygen therapy.
8. Demonstrate in a safe and effective manner the delivery of medical gases.
9. Perform mathematical calculations to evaluate oxygenation.
10. Identify how a Galvonic (Fuel Cell method) measures O<sub>2</sub>.
11. List the steps to calibrating a Galvonic O<sub>2</sub> analyzer.
12. Identify 5 Key O<sub>2</sub> Analyzer trouble shooting steps
13. Demonstrate in a safe manner the storage of medical gasses

## Module 2

## Material Covered:

- Humidity/Medication Aerosol Therapy/Peak Flowmeter
- Humidity and Bland Aerosol Therapy Chapter 38
- Medication Aerosol Drug Therapy Chapter 39

## Assessments:

- Homework
- Discussion Post
- Case Study
- Skill Check Assessment/Laboratory Competency
- Unit Test

## Learning Outcomes:

1. Describe in writing and verbally the factors relating to the goals, indications, contraindications and hazards of Medications aerosol therapy.
2. Identify how aerosols can be weighed and measured.

3. Recognize the patient breathing factors that affect medication deposition & lung location.
4. Identify the Correct Aerosol Delivery Systems based on patient assessment including the Aerogen.
5. Demonstrate in a safe and effective manner the use of a peak flow meter using the traffic light system.
6. Identifies potential complications associated with medication aerosol administration and relevant information (i.e. MOA, Classification, complications...) on drug(s) being administered.
7. Differentiates particle sizes targeted for the upper vs the lower airway.
8. Explains what Mass Median Aerodynamic Diameter(MMAD) means in relation to particle sizes being produced (ref#6)
9. Identifies the percent of the drug (aerosol) that reaches the target tissue.
10. Demonstrate in a safe and effective manner delivery of medication aerosol therapy by small volume nebulizer.
11. Demonstrate in a safe and effective manner delivery of medication aerosol therapy by meter dose inhaler.

### Module 3

#### Material Covered:

#### Lung Inflation Therapy

#### Assessments:

- Homework
- Case Study
- Skill Check Assessment/Laboratory Competency
- Unit Test

#### Learning Outcomes:

1. Describe in writing and verbally the factors relating to the goals, indications, contraindications and hazards of lung inflation therapy.
2. Demonstration in a safe and effective manner lung inflation therapy.
3. Identifies potential complications associated with lung inflation therapy.
4. Explains difference between volume and flow devices.
5. Identifies reasonable patient targets for frequency and volume.
6. Demonstrate the ability to assess effectiveness of a particular lung inflation therapy and if needed, offer an alternative lung inflation therapy.

## Module 4

### Material Covered

### ABG Analysis and Interpretation

#### Assessments:

- Homework
- Case Study
- Skill Check
- Unit Test

#### Learning Outcomes:

1. Identify the basic components of an arterial blood gas and how it relates to the human body.
2. Demonstrate the ability to interpret ABG's, acid base balance, ventilation and oxygenation.

## Part III: Grading and Assessment

### EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS\*:

Students' performance will be assessed and the weight associated with the various measures/artifacts are listed below.

#### Competency Areas:

Pulse Oximetry

Oxygen Setup

Medication Aerosol

MDI Delivery

Peak Flow Meter

### EVALUATION\*

Homework/Quizzes/Assignments	15%
Tests	60%
Final Exam	25%
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	100%

#### Cognitive

- Quizzes, tests, case studies, and presentations, etc.

#### Psychomotor

- All course required Skill Check Assessment and Laboratory Competency Practical Examination must be completed.

### Clinical Competency and Skill Check Assessment:

The student is required to successfully complete each skill check assessment for the course prior to the final laboratory competency practical examination or per the instructor's schedule. Two attempts can be made to pass the lab competencies and skill check. The course instructor will announce the due date of the skill check assessments in the course calendar informational sheet.

### Summary Performance Evaluation

The following will be used to evaluate the clinical/lab performance:

Satisfactory – Completion of first attempt (85-100%) Performed procedure accurately or was able to correct performance without injury to the patient or decreasing effect of therapy being given.

Each competency and skill check are considered a pass/failure. If a student makes less than 85% on the first attempt. The student may repeat the competency/skill check an additional time after the first attempt.

Unsatisfactory performance – Completion of first attempt (less than <85%. Requires remediation under the following categories.

- The psychomotor portion of the performance evaluation is a pass/fail grading criterion. After a student's second attempt, if the student does not pass the physical portion with an 85% or greater. Failure of the physical portion of the course will result in failure of the course.
- Failure to complete a critical skill after the first attempt within the psychomotor evaluation will also result as a failure of the course.

## GRADING SYSTEM:

A grade of "C" or better must be achieved in all required respiratory care program courses for a student to progress through the program. A final grade of less than 75% is not passing in the Respiratory Care Program and does not meet the requirements for progression within the program. This policy is different than the Horry Georgetown Technical College Grading Policy.

### GRADING SCALE:

100 - 90 =	A
89 - 80 =	B
79 - 75 =	C
74 - 69 =	D
68 - 0 =	F

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the [academic calendar](#) for deadlines for

add/drop. You must attend at least one meeting of all your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

#### LATE ASSIGNMENTS:

1. A maximum of one (1) scheduled exam may be made up at the discretion of the course instructor. Any subsequently missed exams will receive a grade of 0.
2. Makeup examinations will be taken in the testing center on campus or a location designated by the instructor.
3. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.
4. All missed exams will incur a 10% overall deduction unless medical documentation is provided.
5. Late Homework assignments will have a deduction of ten points of the total assignment grade. Late homework will not be accepted after 5 days.

## Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student and a student may not be permitted to reenroll.

Respiratory Care follows the 90% attendance policy.

See Student Handbook for attendance policy.

## Part V: Student Resources



### THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):

The SSTC offers to all students the following **free** resources:

1. **Academic tutors** for most subject areas, **Writing Center support**, and **college success skills**.
2. Online **tutoring** and academic support resources.
3. Professional and interpersonal communication **coaching** in the EPIC Labs.

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring, contact the SSTC at [sstc@hgtc.edu](mailto:sstc@hgtc.edu) or self-schedule in the Penji iOS/Android app or at [www.penjiapp.com](http://www.penjiapp.com). Email [sstc@hgtc.edu](mailto:sstc@hgtc.edu) or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC



Georgetown, 520-1455, or go to the [Online Resource Center](#) to access on-demand resources.



## STUDENT INFORMATION CENTER: TECH Central

TECH Central offers to all students the following free resources:

1. **Getting around HGTC:** General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. Use the [Online Resource Center \(ORC\)](#) including Office 365 support, password resets, and username information.
3. **In-person workshops, online tutorials and more services** are available in Desire2Learn, Student Portal, Degree Works, and Office 365.
4. **Chat with our staff on TECH Talk**, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-8552.

Visit the [Tech Central](#) website for more information. Live Chat and Center locations are posted on the website. Or please call (843) 349 – TECH (8324), Option #1.



## HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries are equipped with computers to support academic research and related school work; printing is available as well. Visit the [Library](#) website for more information or call (843) 349-5268.

## STUDENT TESTING:

Testing in an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms (which may have a fee associated with the usage)

Furthermore, tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of

the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

### **DISABILITY SERVICES:**

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to HGTC's [Accessibility and Disability Service webpage](#). The Accessibility and Disability staff will review documentation of the student's disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

### **STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:**

Horry-Georgetown Technical College prohibits discrimination and harassment, including sexual harassment and abuse, on the basis of race, color, sex, national or ethnic origin, age, religion, disability, marital or family status, veteran status, political ideas, sexual orientation, gender identity, or pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation in educational programs and/or activities.

### **TITLE IX REQUIREMENTS:**

All students (as well as other persons) at Horry-Georgetown Technical College are protected by Title IX—regardless of their sex, sexual orientation, gender identity, part- or full-time status, disability, race, or national origin—in all aspects of educational programs and activities. Any student, or other member of the college community, who believes that he/she is or has been a victim of sexual harassment or sexual violence may file a report with the college's Chief Student Services Officer, campus law enforcement, or with the college's Title IX Coordinator or designee.

\*Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

### **INQUIRIES REGARDING THE NON-DISCRIMINATION/TITLE IX POLICIES:**

**Student and prospective student** inquiries concerning Section 504, Title II, Title VII, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.

**Dr. Melissa Batten, VP Student Affairs**

*Title IX, Section 504, and Title II Coordinator*

Building 1100, Room 107A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5228

[Melissa.Batten@hgtc.edu](mailto:Melissa.Batten@hgtc.edu)

**Employee and applicant** inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.

**Jacquelyne Snyder, VP Human Resources**

*Affirmative Action/Equal Opportunity Officer and Title IX Coordinator*

Building 200, Room 205B, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5212

[Jacquelyne.Snyder@hgtc.edu](mailto:Jacquelyne.Snyder@hgtc.edu)