

# **INSTRUCTIONAL PACKAGE**

RES 101 Introduction to Respiratory Care

Effective Term Fall 2025

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# **Part I: Course Information**

Effective Term: Fall 2025

COURSE PREFIX: RES 101. COURSE TITLE: Introduction to Respiratory Care.

CONTACT HOURS: 3 Lecture CREDIT HOURS: 3.

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

The Introduction to Respiratory care is a foundational course for learning the basic skills respiratory therapists need in the healthcare field. In Respiratory 101, students will gain knowledge of professional organizations, laws, ethics, and behaviors expected in a respiratory therapist. Students will learn about the basic anatomy and physiology of the cardiopulmonary system, infection control procedures, and how oxygen and carbon dioxide is transported in the body.

#### **COURSE DESCRIPTION:**

This course includes introduction topics pertinent to entering the respiratory care profession, i.e., medical terminology, ethical issues, and legal issues.

#### PREREQUISITES/CO-REQUISITES:

Admission to the Respiratory Care Program.

#### **REQUIRED MATERIALS:**

Kacmarek, R.M., Stoller, J.K., & Heuer, A.H. (2025). Egan's Fundamentals of Respiratory Care (13th ed). St. Louis, MO: Elsevier/Mosby. ISBN: 9780323931991

Kacmarek, R.M., Stoller, J.K., & Heuer, A.H. (2025). Workbook for Egan's Fundamentals of Respiratory Care (13th ed). St. Louis, MO: Elsevier/Mosby. ISBN: 9780323932004

Please visit the BOOKSTORE online site for most current textbook information.

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

#### **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 an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate. Otherwise, it is preferable to turn off cell phones during lectures.

It is recognized that personal communication devices, including smart phones, can play a fundamental role in both education and urgent personal connections (for example, a school calling about a sick child). For this reason, use of such devices is permitted in the classroom, with specific reservations:

- 1. Please set all devices to 'silent' or 'vibrate' during instructional time.
- 2. Use of devices during testing is NOT allowed.
- 3. Please limit the use of devices to urgent personal connections and educational purposes directly related to the course material being discussed.
- 4. If you receive an urgent text/call during class that requires immediate attention, please quietly excuse yourself from the classroom to respond to the call.
- 5. Please refrain from using 'ear buds' or continually using the device as a learning distraction. Professor retains the right to disallow the use of such devices should the policy become a distraction

# **Part II: Student Learning Outcomes**

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

- 1. Explain the purpose of professional elements of Respiratory Care.
- 2. Apply patient assessment skills to perform basic respiratory therapy procedures.
- 3. Perform proper Universal Precautions and Isolation Procedures.
- 4. Describe the anatomy and physiology of the cardiopulmonary system.
- 5. Apply the anatomy and physiology of the respiratory system to ventilation.
- 6. Apply the factors that involve diffusion of gases within the body.
- 7. Describe the anatomy and physiology of the circulatory system.
- 8. Explain the factors that are involved in oxygen transport throughout the body.
- 9. Explain the factors that involve the movement of carbon dioxide and its role in acid-base balance.
- 10. Explain the effects of aging, high altitude, and high-pressure environments on the cardiopulmonary system.

#### Lecture I

Material Covered: The Respiratory Care Profession, Laws, Ethics, Behaviors History of Respiratory Care Chapter 1 The Profession of Respiratory Therapy Chapter 2 Quality, Patient Safety, and Communication Chapter 3 2025-2026 Principles of Infection Prevention and Control Chapter 4
Ethical and Legal Implications of Practice Chapter 5
Physical Principles of Respiratory Care Chapter 6

Assessments:

Homework/Quizzes/Case Study

Exam

## Learning Outcomes:

- 1. Describe the major respiratory care educational, credentialing, and professional associations.
- 2. Learn about the respiratory care profession, laws, ethics, and behaviors.
- 3. Explain what constitutes an ethical dilemma and how such dilemmas arise in healthcare.
- 4. Describe the information that should be gathered before making an ethical decision.
- 5. Describe what constitutes professional malpractice and negligence.
- 6. Explain how a respiratory therapist can become liable for wrongful acts.
- 7. List the elements that constitute a practice act.
- 8. Explain how licensing affects legal responsibility and liability.
- 9. Describe how changes in healthcare delivery have shaped the ethical and legal aspects of practice.
- 10. Summarize the basic elements of the Health Insurance Portability and Accountability Act of 1996 (HIPAA).
- 11. Discuss the Patient Protection and Affordable Care Act.
- 12. Summarize the basic elements of the National Labor Relations Act.
- 13. Discuss elements of the False Claims Act.
- 14. Describe the role of advanced directives and living wills in healthcare.
- 15. Identify different recordkeeping practices and electronic applications.
- 16. Define the meaning of quality healthcare services.
- 17. State how communication can affect patient care.
- 18. Describe the two-patient identifier system.
- 19. List the factors associated with the communication process.
- 20. Describe how to improve your communication effectiveness.
- 21. Describe how to recognize and help resolve interpersonal or organizational sources of conflict.
- 22. Describe how to apply good body mechanics and posture to moving patients.
- 23. Describe how to ambulate a patient and the potential benefits of ambulation.
- 24. Write definitions of key terms associated with electricity, including voltage, current, and resistance.
- 25. Identify the potential physiologic effects that electrical current can have on the body.
- 26. State how to reduce the risk for electrical shock to patients and yourself.
- 27. Identify key statistics related to the incidence and origin of hospital fires.
- 28. List the conditions needed for fire and how to minimize fire hazards.
- 29. State how communication can affect patient care.
- 30. Describe the two-patient identifier system.
- 31. List the factors associated with the communication process.
- 32. Describe how to improve your communication effectiveness.
- 33. Describe how to recognize and help resolve interpersonal or organizational sources of conflict.

- 34. Describe how to apply good body mechanics and posture to moving patients.
- 35. Describe how to ambulate a patient and the potential benefits of ambulation.
- 36. Identify the potential physiologic effects that electrical current can have on the body.
- 37. State how to reduce the risk for electrical shock to patients and yourself.
- 38. Identify key statistics related to the incidence and origin of hospital fires.
- 39. List the conditions needed for fire and how to minimize fire hazards.
- 40. Describes the properties of gases.
- 41. Discuss the three common temperature scales and how to convert from one system to another.
- 42. How the physiological principles relate to respiratory care.
- 43. Describe the effects that both vaporization and condensation have on internal energy.
- 44. Describe the concept of relative humidity and how it is determined.
- 45. Describe gas diffusion and what.
- 46. Discuss the application of Dalton's law of partial pressures.
- 47. Describe how gases can dissolve into liquids and what affects its solubility.
- 48. Discuss the combined gas laws and the interrelationships between temperature, pressure, and gas volume.
- 49. Describe various kinds of fluid flow and what causes a transition from one kind of flow to another.
- 50. Describe how Boyle's law is applied.
- 51. Describe the changes to pressure in fluid when flow is increased.
- 52. Describe the Venturi effect.

#### Lecture 2

Materials Covered:

The Respiratory System Chapter 9

The Cardiovascular System Chapter 10

Ventilation Chapter 11

Assessments:

Homework/Quizzes/Case Study

Exam

## Learning Outcomes:

- 1. Identify the anatomy of the lungs and thoracic cavities.
- 2. Explain the transport of air into the respiratory system.
- 3. Explain the functions of ventilation in the respiratory system.
- 4. Identify the parts of the cardiovascular system.
- 5. Describe how blood travels through the cardiovascular and pulmonary system.
- 6. Normal heart rate values and pressures of the heart.
- 7. Describe the physiologic functions provided by ventilation.
- 8. Describe the pressure gradients responsible for gas flow, diffusion, and lung inflation.
- 9. Identify the forces that oppose gas movement into and out of the lungs.
- 10. Describe how surface tension contributes to lung recoil.
- 11. Describe how lung, chest wall, and total compliance are related.
- 12. State the factors that affect resistance to breathing.

- 13. State why ventilation is not evenly distributed throughout the lung.
- 14. Identify factors that affect alveolar ventilation.
- 15. How to calculate dead space and the  $V_D/V_T$  ratio.

#### Lecture 3

Material Covered:

Bedside Assessment of the Patient Chapter 16

Interpreting Clinical and Laboratory Data Chapter 17

Assessments:

Homework/Quizzes/Case Study

Exam

Learning Outcomes:

- 1. Describe patient interviews and appropriate interview techniques.
- 2. List four influential factors affecting communication between the respiratory therapist (RT) and the patient.
- 3. Differentiate between signs and symptoms.
- 4. Differentiate between dyspnea and breathlessness.
- 5. Recall four factors necessary to generate an effective cough.
- 6. Identify the five important cough characteristics that the RT is responsible for monitoring.
- 7. Describe how to assess the characteristics of sputum.
- 8. Describe physical assessment of a patient with a fever.
- 9. Calculate smoking history in pack-years.
- 10. Describe the four general steps taken during the physical examination of a patient.
- 11. Describe terms used for sensorium.
- 12. List the five elements that constitute basic vital signs and recite the normal parameters for each variable.
- 13. Identify the seven anatomic sites where a pulse pressure can be palpated during a physical exam.
- 14. Define hypertension and explain how it differs from shock.
- 15. Describe how to measure blood pressure and equipment.
- 16. Describe physical characteristics for patients with chronic illnesses and heart failure.
- 17. Review breathing patterns associated with different diseases and injuries.
- 18. Review physical assessment of the chest.
- 19. Review normal breaths and adventitious breath sounds.
- 20. Describe critical lab values and how it relates to clinical practice.
- 21. Define CBC values and abnormalities.
- 22. Define and review electrolyte disturbances related to normal respiratory functions.
- 23. Define and review clinical tests for cardiac stress, myocardial infarction, coagulation disorders, sputum gram stain and cultures.

## Lecture 4

Material Covered: X-ray Interpretations Gas Exchange and Transport Chapter 12 Review of Thoracic Imaging Chapter 21

Assessments:

Homework/Quizzes/Case Study

Exam

# Learning Outcomes:

- 1. Describe how to evaluate the technical quality of a chest radiograph.
- 2. List the anatomic structures seen on the chest radiograph.
- 3. Describe the common radiographic abnormalities seen in the pleura, lung parenchyma, and mediastinum.
- 4. Understand the value of a computed tomography scan and the use of intravenous contrast.
- 5. Understand the role of ultrasound and magnetic resonance imaging in imaging the chest.

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

# **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.

### **EVALUATION\***

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

# \*Students, for the specific number and type of evaluations, please refer to the Instructor's Course Information Sheet.

Missing/Late Assignments:

- 1. Late assignments after the due date will incur a 10-point penalty.
- 2. Late assignments after end date will not be accepted and grade of zero (0) will be given.
- 3. Arriving late to an exam student will not be permitted to take exam and a 5-point penalty incur, and makeup exam must be completed at testing center within 2 days of exam due date.
- 4. All exams are mandatory and must be completed on date of exam. Exams cannot be made up unless for extenuating circumstances or doctors excuse is provided. Any subsequently missed exams will receive a grade of 0.
- 5. Makeup examinations will be taken in the <u>testing center</u> on campus, or a location designated by the instructor.
- 6. A 10 Point overall deduction will be applied to the makeup examination score for missed examinations unless faculty are notified in advance (more than 12 hours), or medical

- documentation is provided.
- 7. Final exams cannot be made up. Missing a final exam will result in a failure for the course, an "F" will be given for the final grade and removal from the program.
- 8. The discretion of the professor will decide if an absence is excused only under this circumstance will a makeup exam be allowed.

#### **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 <u>academic calendar</u> 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.

# **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. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.** 

**For online and hybrid courses**, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, and if you use a testing center other than those provided by HGTC, the center may charge a fee for its 2025-2026

services.

# **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 Academic Coaching for college success skills.
- 2. Online tutoring and academic support resources.
- 3. Professional and interpersonal communication coaching in the EPIC Labs.

Visit the <u>Student Success & Tutoring Center</u> website for more information. To schedule tutoring or coaching, contact the SSTC at sstc@hgtc.edu or self-schedule in the Penji iOS/Android app or at <a href="https://www.penjiapp.com">www.penjiapp.com</a>. Email <a href="mailto:sstc@hgtc.edu">sstc@hgtc.edu</a> or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the SSTC <a href="mailto:Online Resource Center">Online Resource Center</a> to access ondemand 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. In-person and remote assistance are available for Desire2Learn, Student Portal, Degree Works, and Office 365.
- 3. 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 have librarians and staff who can aid with 2025-2026

research, computers to support academic research and related school-work, and individual/group study rooms. Printing is available as well at each location. Visit the <u>Library</u> 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.

Testing candidates must make their appointments 24 hours in advance.

Students must bring a physical ID in order to take a test.

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 <u>Online Testing</u> 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. Students seeking accommodations are encouraged to visit HGTC's <u>Accessibility and Disability Service webpage</u> for detailed information.

It is the student's responsibility to self-identify as needing accommodations and to provide appropriate documentation. Once documentation is submitted, the student will participate in an interactive process with Accessibility and Disability Services staff to determine reasonable accommodations. Students may begin the accommodations process at any time; however, accommodations are **not retroactive** and will only be applied from the point at which they are approved. Students must contact the office **each semester** to renew their accommodations.

For assistance, please contact the Accessibility and Disability Services team at <u>disabilityservices@hgtc.edu</u> or 843-796-8818 (call or text).

#### **COUNSELING SERVICES:**

HGTC Counseling Services strives to optimize student success through managing personal and academic concerns that may interfere with achieving educational goals. Staff are available to every student for assistance and guidance on personal matters, academic concerns and other areas of concern. HGTC offers free in-person and telehealth counseling services to students. For more information about counseling services, please reach out to <a href="mailto:counseling@hatc.edu">counseling@hatc.edu</a> or visit the website the

# Counseling Services webpage.

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

Our sincere commitment to both effective business management and equitable treatment of our employees requires that we present this Policy Statement as an embodiment of that commitment to the fullest.

Discrimination is conduct that includes unjust or prejudicial treatment based upon an individual's sex, race/color, religion, national origin, age, disability, service in the uniformed services (as defined in state and federal law), veteran status, political ideas, marital or family status, pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation, genetic information, genetic identity, gender expression, or sexual orientation that excludes an individual from participation in, denies the individual the benefits of, treats the individual differently, or otherwise adversely affects a term or condition of a person's working or learning environment. This includes failing to provide reasonable accommodation, consistent with state and federal law, to persons with disabilities.

## 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@hatc.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

#### TITLE IX REQUIREMENTS:

Title IX of the Education Amendments of 1972 protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination.

HGTC prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking and will provide students, faculty, and staff with necessary information regarding prevention, policies, procedures, and resources.

Any student, or other member of the college community, who believes that they have been a victim of sexual harassment, domestic violence, dating violence, sexual assault, or stalking may file a report with the college's Title IX Coordinator or campus law enforcement\*.

\*Faculty and Staff are required to report these incidents to the Title IX Coordinator 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).

**Student and prospective student** inquiries concerning Title IX and its 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@hatc.edu

**Employee and applicant** inquiries concerning Title IX and its 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

<u>Jacquelyne.Snyder@hgtc.edu</u>

#### PREGNANCY ACCOMMODATIONS

Under Title IX, colleges must not exclude a pregnant student from participating in any part of an educational program. Horry-Georgetown Technical College is committed to ensuring that pregnant students receive reasonable accommodations to ensure access to our educational programs.

Students should advise the Title IX Coordinator of a potential need for accommodations as soon as they know they are pregnant. It is extremely important that communication between student, instructors, and the Title IX Coordinator begin as soon as possible. Each situation is unique and will be addressed individually.

Title IX accommodations DO NOT apply to Financial Aid. Financial Aid regulations do not give the College any discretion in terms of Financial Aid eligibility.

Certain educational programs may have strict certification requirements or requirements mandated by outside regulatory agencies. Therefore, in some programs, the application of Title IX accommodations may be limited.

To request pregnancy accommodations, please complete the *Pregnancy Intake Form* that can be found here.