



INSTRUCTIONAL PACKAGE

RES 236

Cardiopulmonary Diagnostics

Effective Term
Fall 2025

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Part I: Course Information

Effective Term: Fall 2025

COURSE PREFIX: RES 236.

COURSE TITLE: Cardiopulmonary Diagnostics.

CONTACT HOURS: 3.

CREDIT HOURS: 3.

RATIONALE FOR THE COURSE:

RES 236 is a course to help you understand and identify the various diagnostic procedures to diagnose different types of respiratory diseases. Based on the diagnostic procedures and diagnosis students will create a treatment plan. In RES 236, you will choose the appropriate respiratory intervention based on the diagnosis of the patient.

COURSE DESCRIPTION:

This course focuses on the purpose, use, and evaluation of equipment/procedures used in the diagnosis and therapeutic management of patients with cardiopulmonary disease.

PREREQUISITES/CO-REQUISITES:

Respiratory Care Program third semester courses RES 235. Required prerequisite courses must be completed with a grade of "C" or better.

REQUIRED MATERIALS:

1. American Heart Association. (2020) Advanced Cardiac Life Support. ISBN# 9781616697723
2. Cairo, J.M. (2014). Mosby's Respiratory Care Equipment (11th ed). ISBN: 9780323712217
3. Kacmarek, R.M., Stoller, J.K., & Heuer, A.H. (2017). Egan's Fundamentals of Respiratory Care (13th ed). St. Louis, MO: Elsevier/Mosby. ISBN: 9780323931991
4. Kacmarek, R.M., Stoller, J.K., & Heuer, A.H. (2017). Workbook Egan's Fundamentals of Respiratory Care (13th ed). St. Louis, MO: Elsevier/Mosby. ISBN: 9780323598057

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.

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.

STUDENT IDENTIFICATION VERIFICATION

Students enrolled in online courses will be required to complete identity verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

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.

PLAGIARISM & CHEATING:

Refer to the College catalog & Student handbook HGTC Handbook. The student may be assigned a failing grade for the course or may be required by the professor to withdraw from the course and/or the respiratory care program. Such actions are deemed to be unprofessional behavior within this program and will not be tolerated.

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

1. Demonstrate the ability to identify the ATS Acceptability and Reproducible Criteria for Spirometry, Lung Volumes, DLCO and 6-minute walk test.
2. Evaluate the 3 components of a PFT; Spirometry, Lung Volumes, and DLCO and identify as normal, obstructive, restrictive, or mixed, hyperinflation, air-trapping, and diffusion impairment.
3. Demonstrate the ability to perform 6-minute walk test, ABG machine maintenance, patient nutritional assessment, and basic polysomnography monitoring, and when necessary, recommend corrective action.
4. Analyze arterial blood gases.
5. Interpret arterial blood gases.
6. Implement a plan of care for respiratory compromised patients.
7. Select the proper respiratory interventions to treat patients mild, moderate, and severe respiratory distress.

Module 1

Material Covered: Pulmonary Function Testing, Interpretation, and Evaluation

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Demonstrate the ability to identify the ATS Acceptability and Reproducible criteria for

Spirometry, Lung

2. Volumes, DLCO and 6-minute walk test.
3. Evaluate the 3 components of a PFT; Spirometry, Lung Volumes, and DLCO and identify as normal, obstructive, restrictive, or mixed, hyperinflation, air-trapping and diffusion impairment.
4. Discuss pulmonary function testing principles.
5. Identify the standard pulmonary function testing equipment.
6. Perform standard pulmonary function studies.
7. Interpret standard pulmonary function studies.
8. Evaluate standard pulmonary function studies.

Module 2

Material Covered: Blood Gas Analysis

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Discuss blood gas analysis principles.
2. Identify the standard blood gas analysis equipment.
3. Perform standard blood gas analysis.

Module 3

Material Covered: Sleep Studies

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Demonstrate the ability to perform 6-minute walk test, ABG machine maintenance, patient nutritional assessment, and basic polysomnography monitoring, and when necessary, recommend corrective action.

Module 4

Material Covered: Respiratory Interventions

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Implement a plan of care for respiratory compromised patients.
2. Select the proper respiratory intervention(s) to treat patients in mild, moderate, and severe respiratory distress.

Module 5

Material Covered: ACLS

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Identify cardiac rhythms.
2. List drugs used for ACLS.
3. Recognize clinical applications identified during ACLS

****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/Projects	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 [testing center](#) 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 [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.

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.**

Attendance for Face-to-Face Courses:

For a 15-week course (fall and spring) the allowed number of absences for a M only class is as follows: 2 absences are allowed regardless of reason. After the allowed number of misses, the student will be dropped from the course with a W or a WF.

Missing a lab day whether it is the same day or different day will incur an absence for the same lecture course.

A tardy is given if the student arrives ten minutes after class starts or before class ends. Three tardies are equivalent to one absence for a 15-week course.

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 [Student Success & Tutoring Center](#) 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 www.penjiapp.com. Email sstc@hgtc.edu or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the SSTC [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. 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 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 [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.

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 [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. Students seeking accommodations are encouraged to visit HGTC's [Accessibility and Disability Service webpage](#) 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 disabilityservices@hgtc.edu 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 counseling@hgtc.edu 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@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

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).

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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](#).