



INSTRUCTIONAL PACKAGE

Respiratory Diagnostics
RES 235

Effective Term
Fall 2022/Spring 2023/Summer 2023

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: Summer 2023

COURSE PREFIX: RES 235

COURSE TITLE: Respiratory Diagnostics

CONTACT HOURS: 3 Lect/3 Lab

CREDIT HOURS: 4

RATIONALE FOR THE COURSE:

Respiratory Diagnostics is a course that will allow students to assess a patient's airway, select proper airway equipment, insert the airway equipment into the patient's airway, and manage the patient's airway. The course will allow the students to maintain a patient's airway by using lung expansion therapy, bronchial hygiene techniques, and suctioning, as well, as perform insertion, maintenance, and removal of artificial airways, which include endotracheal tubes and tracheostomy tubes.

COURSE DESCRIPTION:

This course is a study of diagnostic and therapeutic procedures and will develop the skills required to assess, diagnose, and manage a patient's airway.

PREREQUISITES/CO-REQUISITES:

Program first semester courses RES 101. Required prerequisite courses must be completed with a grade of "C" or better.

***Online/Hybrid** courses require students to complete the [DLi Orientation Video](#) prior to enrolling in an online course.

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

Kettering Classmate® Online Course [Kettering Classmate®](#)

Cairo, J. M. (2018). Mosby's Respiratory Care Equipment, 10th ed. St. Louis, MO: Elsevier/Mosby.

2022-2023

ISBN: 9780323712217

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's student portal for course materials. myHGTC and college email access.

STUDENT IDENTIFICATION VERIFICATION:

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification 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 for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

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 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 BECOME A DISTRACTION.
6. WHEN ON EXPERIENTIAL ROTATIONS, STUDENTS ARE EXPECTED TO ABIDE BY THE POLICIES OF THAT INSTITUTION.

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. Perform proper assessment of a patient's airway to provide access for mechanical ventilation.
2. Diagnose need for airway placement to improve patient respiratory status.
3. Identify and perform the insertion of airway devices.

4. Manage of various airway types for mechanical ventilated patients.
5. Maintain a patient's airway by utilizing lung expansion therapies, bronchial hygiene techniques, and suctioning.
6. Maintenance of various airway devices while on and off a mechanical ventilator.
7. Perform proper removal of various patients' airway devices.

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

Unit 1:

Material Covered: Airway assessment components and interpretation of patient assessment data and select proper treatment plan.

Airway Management Devices Mosby's Chapter 5

Beside Assessment of the Patient Egan's Chapter 16

Review Thoracic Imaging Egan's Chapter 21

Assessments:

- Quiz
- Discussion Post
- Case Study
- Unit Test

Learning Outcomes:

1. Recognize the key anatomical land marks of normal airway.
2. Identify the components of a patient airway assessment.
3. Identify the tools required to perform a patient airway assessment.
4. Demonstrate ability to perform a patient airway assessment.
5. Demonstrate ability to interpret the patient airway assessment data.

Unit 2:

Material Covered: Airway equipment, Manual Resuscitators, Intubation equipment, Endotracheal Tubes and properly performing BMV and endotracheal intubation.

Egan's Fundamentals of Respiratory Care, 11th Edition, Chapter 36

Assessments:

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

Learning Outcomes:

1. Identify various oral, nasal airways and endotracheal tubes.
2. Describe the various materials used to construct artificial airways.
3. State therapeutic objectives, indications, contraindications and hazards associated with the use of artificial airways.
4. Recognize equipment used to aid in the placement of airway devices.
5. Identify parts of various resuscitation bags, their function and hazards associated with manual resuscitators.

6. Describe how a self-inflating resuscitator bag operates. (Include parts)
7. Identify factors which influence the FIO₂ delivered by a resuscitator bag.
8. Identify factors which influence the volume delivered by a resuscitator bag.
9. Perform (BMV) bag mask ventilation.
10. Perform insertion of oral airways and endotracheal tubes.
11. Identify 3 ways to confirm proper ETT placement.
12. Identify the components needed to properly interface the patient's artificial airway and mechanical ventilator circuit.

Unit 3:

Material Covered: Artificial Airways, Tracheostomy, Trach Care and Speaking Valves and proper interface between artificial airway and the mechanical ventilator.

Mosby's Respiratory Care Equipment, 9th Edition, Chapter 5, 6

Egan's Fundamentals of Respiratory Care, 11th Edition, Chapter 36

Assessments:

- Quiz
- Discussion Post
- Unit Test

Learning Outcomes:

1. Identify the methods for establishing a tracheotomy.
2. Identify various trach tubes.
3. Recognize at least 4 factors to consider when switching from an ETT to a Trach.
4. Identify the equipment required to perform tracheostomy care.
5. Identify the need for and the 8 steps required for performing tracheostomy care in a safe and effective manner.
6. List the 3 methods that allow patients with a tracheostomy tubes communicate.
7. Identify the components needed to properly interface the patient's artificial airway and mechanical ventilator circuit.

Unit 4:

Material Covered: Airway Maintenance for the mechanically and non-mechanically ventilated patient, utilizing airway maintenance equipment, sputum cultures, lung expansion therapy, bronchial hygiene and endotracheal suctioning techniques in preparation for proper artificial airway removal.

Mosby's Respiratory Care Equipment, 9th Edition, Chapter 5, 6, 7

Egan's Fundamentals of Respiratory Care, 11th Edition, Chapter 36

Dana Oakes / Classmate Respiratory Simulations

Assessments:

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

Learning Outcomes:

1. List measures to reduce complications from artificial airways.
2. Identify the sequence of events that leads to developing tracheal damage.
3. Compare Minimum Occlusive Volume (MOV) & Minimum Leak Technique (MLT).

4. Identify the Goals, Indications, and Contra-Indications & Hazards of Bland Aerosol Therapy.
5. Identify the difference between active and passive humidification systems.
6. Identify when passive humidification systems (HME) are contra-indicated.
7. Demonstrate the ability to assess and select the appropriate humidity and bland aerosol therapy based on patient case scenario.
8. List & Describe the Goals, Indications, Contraindications & Hazards of Suctioning
9. Identify the Airway Equipment used to perform closed inline suctioning.
10. Determine the correct size suction catheter to be used on a given airway.
11. Perform closed inline suctioning.
12. Identify the need for acquiring a sputum sample for C & S.
13. Identify the equipment needed and the process for acquiring a sputum sample for C & S.
14. Identify the optimum technique for utilizing a small volume nebulizer on a mechanically ventilated patient.
15. Identify the Goals, Indications, and Contra-Indications & Hazards of Lung Expansion Therapy.
16. Identify the Goals, Indications, and Contra-Indications & Hazards of Bronchial Hygiene Therapy.
17. Identify when and how to maintain a patent airway by utilizing lung expansion therapy and bronchial hygiene techniques.
18. Identify the 7 critical areas of responsibility of airway maintenance
19. Perform proper removal of endotracheal tubes.
20. Identify the 7 critical areas of responsibility for airway maintenance.
21. Identify 3 methods to (decannulation / downsizing) wean patients from tracheostomy tubes.

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.***

GRADING SYSTEM:

Please note the College adheres to a 10 point grading scale A = 100 – 90, B = 89- 80, C = 79 – 70, D = 69 – 60, F = 59 and below. You must have your Dean's approval if changes in the scale are made.

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 of 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.
6. Homework or Quiz assignments will not be accepted after 5 days of the due date. The assignment will close, and students will not have any further opportunities to submit.
7. Skill Check Assessment:
8. 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. The course instructor will announce the due date of the skill check assessments in the course calendar informational sheet. Failure to complete a skill check assessment will not allow the student to complete the laboratory competency practical examination, which will result in failure of the course.
- 9.
10. Laboratory Competency Practical Examination:
11. A minimum of 85% and all critical elements must be achieved to pass the laboratory competency practical examination. Two attempts will be given for the competency. Repeat competency will be awarded a maximum of 85%. Students will only be allowed to try the competency one time per day. Failure to pass the competency within two (2) attempts will result in failure of the course.
- 12.
13. Summary Performance Evaluation
14. The following will be used to evaluate the clinical/lab performance:
- 15.

16. 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.
- 17.
18. Unsatisfactory performance – Completion of first attempt (less than <85%). Requires remediation under the following categories.
19. • 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.
20. • Failure to complete a critical skill after the second attempt within the psychomotor evaluation will also result as a failure of the course.

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 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 **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 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 [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.

STUDENT TESTING:

Testing in an **online/hybrid** course may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms

Further more 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, 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 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

EEO and Title IX Coordinator

Building 200, Room 212A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5212

Jacquelyne.Snyder@hgtc.edu