



INSTRUCTIONAL PACKAGE

RES 152
Clinical Applications I

Effective Term
Fall 2023

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: Fall 2023/Spring 2024/Summer 2024

COURSE PREFIX: RES 152

COURSE TITLE: Clinical Applications I

CONTACT HOURS: 9

CREDIT HOURS: 3

RATIONALE FOR THE COURSE:

RES 152 presents students with case studies while integrating clinical and classroom theory. As a student you will demonstrate the ability to apply current and previously acquired clinical skills to patients in current clinical rotations in a professional manner while applying course material to successfully pass respiratory credentialing exams. Students will demonstrate communication skills delivering an appropriate respiratory care plan.

COURSE DESCRIPTION:

This course includes practice of respiratory care procedures in the hospital setting

PREREQUISITES/CO-REQUISITES:

Admission to the Respiratory Care Program. 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.

Dana Oakes, Pocket Guide to Respiratory Care, 9th Edition and ABG Pocket Guide 2nd Edition

ADDITIONAL REQUIREMENTS:

Scrubs, Shoes, Watch and Stethoscope

Optional: hemostats, scissors, and pocket pulse oximeter

TECHNICAL REQUIREMENTS:

Trajectory account for clinical time clock, procedure checklist and clinical assessment evaluations.

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.

See clinical Handbook for experiential Policy and Procedures

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. Administer handwashing to a critical care patient.
2. Administer and follow infection control policies when delivering patient care.
3. Perform basic bedside patient assessment, HR, RR, Sat, Color level of dyspnea.
4. Perform mathematical calculations to evaluate: tank duration, equipment, patient flow, and basic ABG oxygenation/ventilation evaluation.
5. Administer oxygen therapy to a critical care patient.
6. Administer humidity aerosol therapy to a patient.
7. Administer incentive spirometry to a patient.
8. Assess a critical care patient including palpation; percussion; and auscultation; evaluation of radiograph, laboratory, and other diagnostic materials.
9. Perform a basic 12 lead EKG study.
10. Identify basic EKG rhythms & basic arrhythmia.
11. Perform proper skills for BLS certification.
12. Perform basic ABG evaluation.
13. Successfully participate in all Clinical Rotations
 - a. Oxygen Rotation
 - b. Treatment Rotation
 - c. ECG Rotation
14. Abide by all rules and regulations of the respiratory care program.

Module I Clinical Patient Assessment

Material Covered: Clinical Patient Assessment (Chart & Bedside)

- Infection control & handwashing
- Chart Review

- Laboratory Test
- Bedside Patient Assessment
- Assessment of Cardiovascular Function

Assessments:

- Case Study/Quizzes
- Skill Check
- Clinical Sheets

Learning Outcomes and Assessments:

1. Demonstrate knowledge of infection control policies.
2. Demonstration effective handwashing technique.
3. Assess patient chart for current and previous health history.
4. Assess sensorium.
5. Perform physical and visual bedside assessments by assessing the patient's vital signs, breathing patterns, respiratory rate and work of breathing, color, tone, and responsiveness. (HR,RR, SAT, Color and SOB)
6. Perform Inspection and evaluate: Palpation, percussion, auscultation, and evaluation.
7. Demonstrate the ability to perform blood pressure and know normal and abnormal values.

Module II

Material Covered:

- Aerosol Medication Delivery Systems
- Respiratory Medications

Assessments:

- Skill Check
- Lab Competency
- Clinical Sheets

Learning Outcomes and Assessments:

1. Describe the factor relating to the goals, indications, contraindications and hazards of medication aerosol deliver.
2. Demonstrate use and set up of medication deliver systems to the patient.
3. Demonstrate in a safe and effective manner deliver of medication by small volume nebulizer.
4. Demonstrate in a safe and effective manner deliver of medication by metered dose inhaler.

MEDICATION DELIVERY ROTATION OBJECTIVES

Student Preparation:

Prior to this rotation, the student is required review specific terms associated with various medication delivery systems and respiratory medications used in those systems.

Over All Objective:

The overall objective of this rotation is to test the skills presented in the previously-taken didactic courses specifically related the aspects of medication delivery systems and pharmacology.

Objectives:

1. Perform medication delivery using SVN and MDI's.
2. Troubleshoot medication delivery systems.
3. Monitor vitals and patient breath sounds during before, during and after medication deliver.
4. Assess patient response to respiratory medication treatments.
5. Identify adverse reactions to medications and modify treatments based on physician orders.

Module III

Material Covered: Medical Gas and Oxygen Therapy

Resources:

- Mosby's Respiratory Care Equipment, 9th Edition
- Egan's Fundamentals of Respiratory Care, 11th Edition
- Dana Oakes

Assessments:

- **Case Study / Tests /TMC Exam**
 - List and explain the Goals, Indications, Contra-indications and hazards of Medical Gas and Oxygen Therapy.
 - Interpret a Medical Gas and Oxygen Therapy case study and determine if the therapy ordered was indicated or contra-indicated.
- **Clinical Performance/ Skill Check Video following (DAS) Data Arc Sheet.**
- **Clinical Simulation**

Learning Outcomes: (Psychomotor-Skills)

1. List and explain the Goals, Indications, Contra-indications and hazards of Oxygen therapy.
2. Interpret an O₂ Therapy case study and determine if therapy was indicated or contra-indicated.
3. Perform medical gas therapy.

Oxygen Therapy Rotation

Student Preparation:

Prior to this rotation, the student will review the following concepts and terms associated with the patient administration, weaning and discontinuation of medical gases such as: O₂, NO, He/O₂. (Tank colors, gas property, analyze and adjust medical gas concentration, tank safety systems, tank sizes, bank systems and liquid O₂ systems, flow meters, duration of equipment flow and patient demand flow, regulators, reducing valves, blenders, high / low flow and fixed / variable O₂ devices. Normal patient VS and the various assessment ranges used to recommend appropriate treatment for patients who show signs of hypoxemia and hypoxia.

Over All Objective:

The overall objective of this rotation is to test the skills presented in the previously taken didactic courses specifically related to oxygen therapy and care of patients on this therapy as applicable to the clinical environment. It is the intent of the clinical experience to develop confidence and improvement on deficiencies.

Objectives:

1. Identify the various cylinder colors, shoulder stamps and labels and interpret them accurately.
2. Identify the various storage locations of cylinders in the hospital. They should know the laws governing storage of cylinders.
3. The student should be able to safely transport cylinders from place to place using the proper equipment and body mechanics.
4. Understanding and identification for each safety system must be complete. They should be able to connect and disconnect hardware easily and without delay.
5. Identify various parts of the regulator, and know the difference between a preset, an adjustable, and a multistage regulator. The student should also know the various safety pressure relief valves.
6. The student must be able to apply a regulator to a cylinder with ease and without delay. They should take precautions to keep dirt out of the regulator.
7. The student should be able to pressurize and decompress a regulator without damage to the device and be able to remove and store the regulator properly.
8. The student must be able to identify the various parts of a flow meter and know the difference between compensated and uncompensated. They must be able to test a flow meter for compensation.
9. Should be able to connect a flow meter to a gas source, humidifiers and other gas administration equipment devices.
10. The student must be able to assess patient and equipment to determine if it is a high or low flow system and is delivering correct O₂ percentage.
11. The student must be able to correct the situation if there is evidence the system does not meet or exceed patient's peak inspiratory flow.

Emphasized Clinical Tasks by Semester Note:

Emphasized Clinical Tasks are those procedures the students are learning to perform and will be evaluated on during the semester. Students are expected to perform all procedures that they have been "Checked Off" on with minimum supervision.

Emphasized Clinical Tasks by Semester Note:				
Semester	Class	Course	Emphasized Clinical Tasks	Tasks that may be performed with minimum supervision
Fall	Freshmen	RES 152	Handwashing, Chart Review, Patient Assessment, O2 Therapy, Tanks, Incentive Spirometry, Aerosol/Humidity Therapy, CPR	
	Seniors	RES 253	Mechanical Ventilation, Vent Graphics, NIPPV, Intubation, Home Care, PFT/Interpretation	O2 Therapy, Lung Inflation / IS, Aerosol/Humidity Therapy, Mucus Clearance (P&PD, Flutter Valve), CPR, ECG, ABG analysis, Airway care/Sxn, Mechanical Ventilation, PFT/Interpretation
Spring	Freshmen	RES 154	Medication Aerosol, Lung Inflation Therapy (Easy PAP/ IPPB), Aerosol/Humidity Therapy, Mucus Clearance (P&PD, Flutter Valve), PFT/Spirometry, ABG's, SXN, CPR, ECG	Handwashing, Chart Review, Patient Assessment, O2 Therapy, Tanks, Lung Inflation / IS, Aerosol/Humidity Therapy, CPR
	Seniors	RES 254	Adult Ventilator Care, Cardiac Catheterization, Neo/PEDS, Sleep Lab, Emer. Dept., CPR	O2 Therapy, Lung Inflation/IS, Aerosol/Humidity Therapy, Mucus Clearance (P&PD, Flutter Valve), CPR, ECG, ABG analysis, Airway care/Sxn, Mechanical Ventilation, PFT/Interpretation/PALS/NRP/ACLS
Summer	Freshman	RES 249	ABG analysis, Airway care/Suctioning, Mechanical Ventilation Set Up, ACLS	O2 Therapy, Lung Inflation Therapy (Easy PAP/IPPB), Incentive Spirometry, Aerosol/Humidity Therapy, Mucus Clearance (P&PD, Flutter Valve), CPR, ECG, ABG analysis, Airway care/Suctioning

Clinical Competency Performance Criteria

Trajecsys clinical assessment sheets are available diagnostic competency and are required to evaluate Student's psychomotor, cognitive and effective evaluation.

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.

Cognitive

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

Psychomotor

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

Affective

- Development of appropriate attitude is as important as skill and knowledge development.

Affective evaluation will focus on attention on the development of professional behaviors.

" Students, who consistently are unable to meet the clinical objectives, use unsafe methods of delivering patient care, who show inadequate preparation in caring for patients, or who demonstrate unprofessional conduct in the clinical area may receive an unsatisfactory clinical evaluation. An unsatisfactory clinical evaluation constitutes failure of the course and immediate withdrawal from the program."

Competency Areas:

Handwashing

Patient Assessment

Oxygen Assessment

Incentive Spirometry

Nebulizer Setup

EVALUATION*

Clinical Documentation	25%
Case Studies/Affective Evaluations	25%
Clinical Competencies	20%
Lab Exam	15%
<u>Final Written</u>	<u>15%</u>
	100%

Missing/Late Assignments:

1. Missing daily logs will be considered an absence student will incur an absence and will be required to make up the day.
2. Missing daily logs is considered an unexcused absence.
3. Late homework assignments will have a deduction of ten points of the total assignment grade.
4. Each student must demonstrate safety and competence in clinical competency practical examinations.
5. All Trajecsyst documentation will be accepted up to 5 days after the due date. Trajecsyst documentation will not be accepted after the 5-day courtesy period and a grade of zero (0) will

be assigned to portion of the overall grade. The student will be required to make up the entire clinical day unless written proof for your daily task is provided.

6. Any assignment that is reopened after the end date will incur 10-point deduction.

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.

Affective Evaluations

Affective evaluations are the third part of the clinical evaluation process. They represent the instructors' overall view of the student's ability to communicate, confidence and independence, initiative and cooperation, maturity, professional ethics, organization, and theory application. Points for the observed level of performance are assigned. Guidelines for outstanding behavior are outlined in the Student Handbook, Policies and Procedures of the Respiratory Care program.

5= Exceptional

Ready for clinical application with minimal supervision. Always arrives on time and prepared. Always exhibits concern for the dignity and welfare for patients and team members; prevents conflict of interest; always takes measures to deal with conflict effectively. Demonstrates a superior understanding of the concepts, facts, and theories specific to the situation. Can perform the skill with confidence, without error and greatly exceeding standards. Seldom requires assistance. Plans, always works efficiently, and manages time wisely.

4= Above Average

Regularly arrives on time and prepared. Consistently displays concern for dignity and welfare of

patients and team members; prevents conflict of interest; seeks assistance when conflict arises. Demonstrates a complete and thorough understanding of the concepts, facts, and theories specific to the situation. Can perform the skill with confidence and above the expected standards. Requires minimal assistance. Completes assigned tasks in a timely fashion, and seldom needs direction.

3= Acceptable

Rarely absent but informs appropriate personnel; is seldom late or unprepared but notifies appropriate personnel. Generally, displays concern for dignity and welfare of patients and team members; avoids conflict of interest; and recognizes conflicts as they arise. Demonstrates a general knowledge of the concepts, facts, and theories specific to the situation. Carries out the skill without significant error and meets the accepted standards most of the time. Requires occasional assistance. Completes assigned tasks, needs occasional direction.

2= Below Average

Is periodically late or unprepared. Sometimes neglectful of patients or team members dignity or welfare; occasionally fails to recognize conflict of interest; needs direction in avoiding conflict. Demonstrates an incomplete understanding of the concepts, facts, and theories specific to the situation. Makes non-critical errors when performing the skill and barely meets the expected standards. Inconsistent in completing tasks and needs help in prioritizing work. Requires frequent prompting or assistance.

1 = Unacceptable

Absent repeatedly and neglects to inform appropriate personnel; student is frequently late and unprepared. Is negligent or inconsiderate of patients or team member's dignity or welfare; or demonstrates conflict of interest; or provokes conflict. Demonstrates no understanding of the concepts, facts, and theories specific to the situation. Cannot perform the skill or is in danger of harming the patient. Needs constant assistance. Rarely completes assigned tasks, wastes time, and needs constant assistance and direction.

- N/A Not Applicable- Objective not applicable to this clinical setting
- N/O Not Observed-Objective Not Observed to the extent that a rating is appropriate.
- *Designated safety criteria elements that the student must receive 4 to pass the course regardless of the average score
- **designated behavioral foundational elements in clinical practice that the student must receive a 4 to pass the course regardless of the average score**

***Students who receive a score less than 3 regardless of average affective score will receive a verbal warning for 1st offense, 2nd offense student will receive a written warning and 10-point deduction in overall course grade, and 3rd offense student will be removed from clinical rotations with a "F" as the final clinical grade

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.**

See Respiratory Care Clinical Manual 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 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.



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

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