

# COLLEGEWIDE COURSE OUTLINE OF RECORD

## RESP 108, CLINICAL APPLICATIONS IN ADVANCED ASSESSMENT AND CARE OF A CARDIOPULMONARY PATIENT

COURSE TITLE: Clinical Applications in Advanced Assessment and Care of a  
Cardiopulmonary Patient

COURSE NUMBER: RESP 108

PREREQUISITES: RESP 101, Assessment and Caring for a Respiratory Patient, RESP 102  
Advanced Assessment and Care of a Cardiopulmonary Patient, RESP 103, Cardiopulmonary  
Anatomy and Physiology, RESP 107, Clinical Applications of Assessment and Caring for a  
Respiratory Patient, and completed health forms and required pre-clinical documents and  
Program Chair Approval

COREQUISITES: RESP 102, Advanced Assessment and Care of a Cardiopulmonary Patient

SCHOOL: Health Sciences

PROGRAM: Respiratory Therapy

CREDIT HOURS: 2

CONTACT HOURS: Clinical Applications: 10

DATE OF LAST REVISION: Fall, 2020

EFFECTIVE DATE OF THIS REVISION: Spring, 2021

CATALOG DESCRIPTION: Provides supervised experience in selected cardiopulmonary procedures  
and advanced patient assessment techniques. Students will perform electrocardiograms, capnography,  
airway clearance and various hyperinflation techniques (PAP), noninvasive ventilation and performing  
arterial blood gas punctures. Students will participate in the development of respiratory care plans,  
intra-hospital patient transports, and rapid response teams to improve patient care. Assembling and  
troubleshooting respiratory equipment is required. Students may have observation rotations in critical  
care areas. Continuing certification in CPR is required.

MAJOR COURSE LEARNING OBJECTIVES FROM 2020 NBRC MATRIX: Upon successful  
completion of this course the student will be expected to:

1. Retain knowledge, skill and competencies from prerequisites courses.
2. Recall and review policies and procedures for the hospital and Respiratory Care Department
3. Evaluate data in the patient record
  - a. Monitor trends (non-invasive capnography)
4. Perform clinical assessment by interviewing to evaluate:
  - a. Smoking history
  - b. Environmental exposures
  - c. Activities of daily living
5. Perform clinical assessment by inspection to assess skin integrity (pressure ulcer, stoma site).
6. Perform procedures to gather clinical information
  - a. 12 lead ECG
  - b. Non-invasive monitoring (capnography)
  - c. Blood gas sample collection and analysis and/or hemoximetry (co-oximetry)
  - d. Pulmonary Mechanics ( $V_E$ ,  $V_T$ , NIF, VC, MEP)

7. Evaluate procedures results
  - a. Non-invasive procedures (capnography)
8. Recommend Diagnostic Procedures
  - a. Non-invasive monitoring (capnography)
9. Assemble and troubleshoot equipment
  - a. Secretion clearance devices (HFCWO, vibratory PEP, IPV, insufflation/exsufflation devices)
  - b. Patient breathing circuits (CPAP/BiPAP)
10. Perform airway clearance and lung expansion techniques
  - a. Postural drainage, percussion or vibration
  - b. Mechanical devices HFCWO, vibratory PEP, IPV, insufflation/exsufflation devices)
  - c. Hyperinflation techniques (PEP, PAP)
11. Supports oxygenation and ventilation by initiating and adjusting mask or nasal CPAP and noninvasive ventilation
12. Ensures modifications are made to modalities (e.g., hyperinflation, airway clearance) included in the respiratory care plan by:
  - a. Treatment termination for life threatening adverse events
  - b. Recommending initiation of treatment based on patient response
  - c. Discontinues treatment based on patient response
13. Utilizes evidence based medicine principles
  - a. Classification of disease severity
  - b. Recommendations for changes in therapeutic plan when indicated
14. Maintain records specifying therapy administered, date, time, frequency of therapy, medication, and vital signs (paper or electronic charting)
15. Provide respiratory care in high risk situations
  - a. Medical emergency team (MET)/rapid response team
  - b. Patient transport within a hospital
16. Conduct patient and family education
  - a. Safety and infection control
  - b. Home care and related equipment
  - c. Lifestyle changes (e.g. smoking cessation, exercise)
  - d. Disease management

**COURSE CONTENT:** Topical areas of study include –

Hospital policies and procedures / hospital orientation  
 Electrocardiograms  
 Capnography  
 Airway clearance devices (e.g., vibratory PEP/Flutter, Acapella, TheraPEP, etc...)  
 Hyperinflation (EzPAP, AccuPAP, CPAP)  
 Directed cough techniques  
 Chest physiotherapy  
 HFCWO  
 Arterial blood gas punctures and analysis  
 Within a hospital patient transport  
 Medical emergency team (MET)/Rapid Response Team

Case studies with care plans  
Evaluations

Procedures:

1. 12 Lead EKG
  2. Arterial Blood Gas Puncture
  3. Hyperinflation (EzPAP, CPAP)
  4. Bronchial Hygiene (CPT, Vibratory Pep)
  5. Directed Cough Technique
  6. Capnography (noninvasive)
  7. Tracheostomy Change
  8. Noninvasive Ventilation Initiation
  9. Noninvasive Ventilation Round
  10. Pulmonary Mechanics ( $V_E$ ,  $V_T$ , NIF, VC, MEP)
- Total procedures: 10

**HOW TO ACCESS THE IVY TECH COMMUNITY COLLEGE LIBRARY:**

The Ivy Tech Library is available to students' on- and off-campus, offering full text journals and books and other resources essential for course assignments. Go to <http://www.ivytech.edu/library/> and choose the link for your campus.

**ACADEMIC HONESTY STATEMENT:**

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

**ATTENDANCE:**

Students are expected to attend and participate regularly in class meetings, online learning activities and other activities assigned as a part of a course of instruction. Faculty are required to report student participation in compliance with institutional policies and federal financial aid guidelines. Faculty and staff shall be sensitive to students' religious beliefs and observances, including an expectation that instructors make reasonable arrangements when a student must miss an exam or other academic exercise due to their religious observance. When notified in advance, and when possible, faculty will make allowances for students to make up missed work.

#### COPYRIGHT STATEMENT:

Students shall adhere to the laws governing the use of copyrighted materials. They must ensure that their activities comply with fair use and in no way infringe on the copyright or other proprietary rights of others and that the materials used and developed at Ivy Tech Community College contain nothing unlawful, unethical, or libelous and do not constitute any violation of any right of privacy.

#### ADA STATEMENT:

Ivy Tech Community College seeks to provide reasonable accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, please contact the Office of Disability Support Services.

If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classroom.

#### TITLE IX STATEMENT:

Ivy Tech Community College is committed to providing all members of the College community with a learning and work environment free from sexual harassment and assault. Ivy Tech students have options for getting help if they have experienced sexual assault, relationship violence, sexual harassment or stalking. This information can be found at <https://www.ivytech.edu/prevent-sexual-violence/index.html>.

If students write or speak about having survived sexual violence, including rape, sexual assault, dating violence, domestic violence, or stalking, federal law and Ivy Tech policies require that instructors share this information with the Campus Title IX Coordinator. The Campus Title IX Coordinator will contact students to let them know about accommodations and support services at the College and in the community as well as options for holding accountable the person who harmed them. When contacted, students are not required to speak with the Campus Title IX Coordinator.

If students do not want the Title IX Coordinator notified, instead of disclosing this information to their instructor, students can speak confidentially with certain individuals at the College or in the community. A list of these individuals can be found at <https://www.ivytech.edu/prevent-sexual-violence/index.html> under Confidential Employees and/or Community Resources.