

**Bergen Community College**  
Division of Health Professions  
Department of Respiratory Care  
**Respiratory Care Clinical Externship V**

Semester and Year: Spring

Course and Section Number: Respiratory Care Clinical Externship V, RSP-235-001

Meeting Times and Locations:

Instructor:

Office Location:

Phone:

Departmental Secretary:

Office Hours:

Email Address:

**Course Description**

Lecture hours, laboratory hours, and credits: 16 labs, 2 credits

Prerequisites: RSP-231, RSP-240, and RSP-250. Co-requisites: RSP-241 and RSP-260

Course Description: This final clinical course is designed to enable the student finalize training in the critical care areas and specialty sites. In addition, students will also rotate through the neonatal and pediatric units. Emphasis is placed on patient evaluation, management strategies, decision making skills, and critical thinking skills.

**Student Learning Objectives:** As a result of meeting the requirements in this course the student will:

1. Demonstrate their knowledge of the clinical and physiological monitoring of all patients during mechanical ventilation.
2. Describe clinical situations in which suppression of ventilation is desirable or undesirable.
3. Demonstrate proper cuff management in patients with endotracheal or tracheotomy tubes.
4. Measure lung / thorax compliance and airway resistance and explain the importance of this measurement.
5. Describe the rationale, utilization, and basic techniques for the following diagnostic procedures or tests:
  - a. Radiological assessment
  - b. Laboratory assessment
  - c. Bronchoscopy
6. Discuss the causes and clinical signs of the harmful effects of mechanical ventilation.
7. Be proficient with simple spirometry, drawing arterial blood gases, and the evaluation of these results.
8. Develop a home care regime for a COPD patient.
9. Perform bronchial hygiene therapy on patients.
10. Identify basic hemodynamic monitoring techniques, normal values, and clinical conditions associated with abnormal values.
11. Be familiar with departmental management, with the emphasis on the scheduling of staff, evaluation of equipment, assignment of duties, and departmental committee functions.

12. Interpret EKG rhythms, PFT results, chest x-rays, laboratory values, and bronchoscopy findings.
13. Assist with the administration of any available pulmonary function tests (including bronchodilator therapy), when permitted by the Pulmonary Function Lab technician.
14. Observe and assist (when/where available) bronchoscopy studies and stress testing.
15. Participate in cardio-pulmonary resuscitation efforts on all patients when indicated.
16. Participate in physician, nursing, and respiratory therapy rounds where applicable.
17. Identify and describe any non-pulmonary medications administered to patients in the clinical setting.
18. Teach breathing exercises to appropriate patients.
19. Define the specific purposes of pulmonary function testing.
20. Differentiate lung volume / capacity measuring tests, air flow-volume measuring tests, and supplementary pulmonary function tests (non-standard spirometry).
21. Describe general maneuvers/means of measuring lung volumes / capacities, air flow-volume, and supplementary pulmonary function tests.
22. Describe a systematic means of interpreting pulmonary function test results.
23. Explain the usefulness of bronchodilator therapy during pulmonary function testing and determine the usefulness of bronchodilator therapy by assessing pulmonary function test results.
24. Assist with the administration of any available pulmonary function tests (including bronchodilator therapy), when permitted by the pulmonary function lab technician.
25. Observe (when/where available) bronchoscopy studies and stress testing.
26. Observe, assist or perform the pulmonary function studies: forced expiratory volumes, functional residual capacity, and diffusing capacity.
27. Observe, inspect, or use various pieces of equipment including: isolette, oxygen hood, endotracheal tubes, laryngoscope, manual resuscitator with mask, chest vibrators / percussors, nasal CPAP prongs, pulse oximeter probes and monitor, blood gas analyzer, and ventilators.
28. Assist and perform pulmonary lavage, manual ventilation, and suctioning.
29. Assist and perform the drawing, analysis of umbilical artery, capillary, and umbilical cord blood samples.
30. Inspect and discuss various chest-x-ray patterns including: hyaline membrane disease (HMD), bronchopulmonary dysplasia (BPD), atelectasis, diaphragmatic hernia, pneumothorax, and epiglottitis.
31. Set-up, initiate, monitor, troubleshoot, change, wean, and discontinue infant, pediatric ventilator, oxygen support.
32. Interpret and respond appropriately to blood gas values.
33. Differentiate and explain the modes of mechanical ventilation / support.
34. Perform chest physiotherapy on infants and children.
35. Participate in intubations and extubations when indicated.
36. Thorough observation, questioning, discussion, and studying, list, define, or describe, on paper, important information related to the following:
  - a. Thermoregulation of the newborn
  - b. Transillumination
  - c. APGAR scoring
  - d. Normal newborn blood gas values (arterial and capillary)
  - e. Medications - furosemide (lasix), prisolone hydrochloride (tolazoline), indomethacin, vitamin E, dopamine, prostaglandin E, chloral hydrate, (noctec), mannitol, phenobarbital, and ritodrine hydrochloride.
  - f. Newborn / pediatric normal vital sign values (should include temperature, pulse, blood pressure, respiratory rate, fluid intake / output, and EKG).
  - g. Upper airway obstructions in pediatric patients (croup and epiglottitis) and neonates (post-extubation edema).
  - h. Meconium aspiration syndrome, hyaline membrane disease (HMD), and bronchopulmonary dysplasia (BPD).
37. Participate in physician rounds with one or more pulmonary physicians at during their clinical rotation with the goal of learning how a physician applies anatomy, physiology, pharmacology, physical assessment, and other principles in treating patients and will develop their own care

- plan to be evaluated by the physician.
38. Work, when available, with a discharge planner to understand the process of transitioning a patient from hospital to sub-acute, rehabilitation, or home.
  39. Participate in a pulmonary rehabilitation program with the goal of learning how a patient can benefit from established patient goals.
  40. During the pulmonary rehabilitation program, participate in patient assessment and training for their own care and strengthening plan.
  41. Satisfactorily meet the objectives from all previous clinical courses.
  42. Evaluated on the above objectives, in full, and is expected to pursue certification promptly following instruction and adequate practice of skills.
  43. Read all recommended reading assignments prior to the clinical session in which that subject will be covered. Failure to do so will slow the learning process and cause the student to be inadequately prepared for evaluation, which in turn will reflect on the student's grade.
  44. Demonstrate knowledge of any procedure covered in clinical, lab, or lecture by being subjected to unannounced quizzes.
  45. Present questions to their clinical instructor which directly relate to their clinical experience.
  46. As required at the end of the shift, present a report and patient status update to their clinical instructor and the therapist that the student has worked with throughout the day.

### **Course Content**

This course will be presented and delivered at specific hospitals sites. Each site can offer different exposures to the different patients and equipment used in respiratory care.

### **Special Features of the Course**

MoodleRooms is used to enhance the interaction with the student.

#### **Anecdotal Notes:**

Each student is required to complete, and review with his or her instructor, an anecdotal note form for each day in clinical into the DataArc system. Each clinical instructor must validate these notes in the DataArc system.

### **Course Texts and Other Study Materials**

#### **Texts:**

- Kacmarek R. Egan's Fundamentals of Respiratory Care, 11<sup>th</sup> ed. Elsevier, ISBN-13: 978-0-323-34136-3
- Computer software: competency system by: DataArc

#### **Reading Assignment from Egan's:**

- Respiratory Failure and the Need for Ventilatory Support
- Mechanical Ventilators
- Physiology of Ventilatory Support
- Initiating and Adjusting Ventilatory Support
- Noninvasive Positive Pressure Ventilation
- Monitoring and Management of the Patient in the ICU
- Discontinuing Ventilatory Support
- Neonatal and Pediatric Respiratory Care
- Patient Education and Health Promotion
- Cardiopulmonary Rehabilitation

### **Research, Writing, and Examination Requirement**

#### **Competency Evaluations:**

Prior to performing a competency in the clinical setting, the student must have successfully completed the competency in the laboratory. The clinical instructor will then evaluate individual competencies performed by the student in the hospital and enter them into the DataArc system. The competency evaluation for each task must be attained at a satisfactory level. For this portion of the final course

grade, the student will be graded on completing a minimum of 78% of assigned competencies to receive full credit. Credit is only earned on those competencies completed with a satisfactory rating.

A student who has successfully achieved a competency will be expected to repeat the competency, when necessary, at an acceptable level during subsequent clinical experiences.

**Oral Presentations:**

Students may be required during the semester to present an oral case study to the medical director, any clinical staff members and their fellow students.

**Final exam:**

5 Clinical Simulations (Simulations to be announced). Each simulation is worth 20% and will be graded on a pass/fail basis.

**Means of Assessment**

Students will be assessed in the following methods: via clinical instructor affective evaluations, procedural competency evaluations, and a written exam based on board self-assessment style examinations.

**Grading Policy**

**Grade Computation:**

The clinical instructor will evaluate individual competencies performed by the student. The competency evaluation for each procedure must be attained at a satisfactory level within a prescribed time period.

**Evaluation of Clinical Performance:**

Each student will have an evaluation of overall clinical performance at the end of each clinical rotation. The average of these evaluations will be the basis for part of the final course grade.

**Grading Format:**

Instructor Evaluations	60%
5 Clinical Simulations (Simulations to be announced)	30%
Procedure Competency Evaluations	10%

**Grade Determination:**

A	Student must excel with theoretical knowledge, excel in laboratory / clinical performance areas	93-100
B+	Student must show distinction with superior theoretical knowledge and in laboratory / practical performance areas	88-92.9
B	Student must show above average knowledge and an above average standard of achievement in laboratory / practical performance areas	83-87.9
C+	Student must meet and attain the standard of achievement with reasonable theoretical knowledge and laboratory / practical performance skills	78-82.9
F	Student fails to meet acceptable standards in classroom or laboratory / practical performance areas	<78
N	Incomplete – Student has not completed course requirements	

**Late work or Assignments:**

Late work and make-up examinations will be penalized with a grade being no greater than 78%. Late work will be submitted as soon as possible; makeup exams will be completed at the end of the semester.

## **Attendance Policy**

### **BCC Attendance Policy:**

All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.

### **Course Attendance Policy:**

No absent exceptions, for any reason. For every absence in any given semester there will be a total of 5 points taken off the student's final clinical grade. During the final clinical externship RSP-235, if the student has more than two (2) absences they will have to make up these days during summer clinical (RSP-226), and this will delay receiving the official certificate of completion until the days are made up. The student will not be expected to register for another RSP-226 section, but will be expected to "audit" those clinical days.

## **Departmental Policy Statements**

1. Acceptable quality of work and mature behavior are expected from every student at all times. Students are regarded as professionals and are expected to conduct themselves accordingly.
2. High standards of professional performance demand that students maintain good academic progress throughout their course of study in the program.
3. Students demonstrating chronic tardiness or absenteeism will be placed on academic warning or probation, and may be subjected to termination from the program.
4. Absence from a class during a scheduled exam will be subject to the policy of the instructor for that specific course. If the student is going to miss a scheduled exam it is expected that the student will contact the instructor ahead of time by e-mail or phone to the department office.
5. All students are required to adhere to the policies and procedures of the school as outlined in the Bergen Community College Student Code of Conduct.
6. Cell phones are not to be used during clinical.
7. During scheduled exams, cell phones and electronic/smart watches must be left at the proctors table, or in the student's personal bag at the front of the classroom. No personal belongings are permitted with the student during an examination.
8. Student's must be in clinical uniform at all times when in the Health Professions Building and any Respiratory Care functions at the college.
9. Students must wear full uniform and lab coat when in the laboratory and simulation center. Proper shoes must also be worn with uniform, especially in the lab.
10. Additional department policies are located in the Student Policies and Procedures Manual.

### **Student and Faculty Support Services**

1. The program faculty maintain office hours for counseling and are available to provide tutorial assistance to students.
2. Students must make appointments in advance to meet with the respective instructors.
3. Students may also obtain assistance from the College Tutoring Center. Appointments must be made in advance through this center.
4. The College has a personal counseling center for those students who may need personal assistance. Appointments are made directly through this center.
5. Any problems, concerns, or questions should be directed to the course instructor or the student's advisor.
6. Statement on Civility
  - a. Refer to the Standards of Conduct subsection found in the Student Judicial Affairs Policies and Procedures in the Bergen Community College Student Code of Conduct.
7. Academic Integrity
  - a. Refer to the Bergen Community College Student Code of Conduct.
8. Other possible College, Divisional, and/or Departmental Policy Statements to be referenced
  - a. Disability Services (Office of Specialized Services OSS)
  - b. Sexual Harassment
  - c. Social Media Policy and usage as a student of a Health Profession- please refer to the program's Policy and Procedure Manual.
  - d. Acceptable use of Bergen Community College Technology- found in the Student Code of Conduct.
9. Student and Faculty Support Services
  - a. Refer to the College Catalog for Academic and Student Support Services, ie., Center for Health, Wellness, and Personal Counseling; Office of Specialized Services; Tutoring Center, etc.
10. Bergen Community College Library
  - a. The Sidney Silverman Library is committed to providing a quiet, welcoming, respectful atmosphere conducive to study and research in an environment that is comfortable, clean, and safe. The use of the library will be beneficial in providing resources on researching topic information, citation styles, finding current articles among many other media services available.