

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

Date of Most Recent Syllabus Revision: January 2015

Semester and Year: Spring 2015

Course and Section Number: Respiratory Care Clinical Externship II, RSP-225-001

Meeting Times and Locations: Monday and Tuesday, 7 am to 3 pm, various hospital sites

Instructor: Professor Kelly Horgan and various clinical instructors

Office Location: S-107

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Departmental Secretary: Mrs. Gerri Farrell, S-336

Office Hours: Tuesday 3:00 pm to 4:00 pm, Thursdays 9:15 am to 11:15 am

Email Address: khorgan@bergen.edu or via Moodle

Course Description

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

Prerequisites: RSP-110, RSP-119, and RSP-121; Co-requisites: RSP-210, RSP-220, RSP-222

Course Description: This course provides the appropriate setting for the continuation of practicing and refining skills obtained throughout the course of the initial clinical experience. The student is provided the opportunity to administer medication through various types of therapy. They will also perform cardiopulmonary resuscitation, perform airway care and management, infection control procedures, patient assessments, apply non-invasive ventilation therapy, and evaluate and record pertinent data in the patient's chart.

Student Learning Objectives: As a result of meeting the requirements in this course, at a minimum proficiency of 75%, the student will:

1. Correctly assess and evaluate the following information concerning patients: depth of breathing, accessory muscle use, symmetry of chest, symmetry of chest wall movement, skin color and condition, finger nail condition, posture, scars, cough, speech pattern, position of trachea, jugular vein distention, breath sounds, and voice sounds.
2. Become better acquainted with aerosol / humidity therapy, especially that being delivered to artificial airways such as tracheotomies and endotracheal tubes.
3. Recognize contraindications to coughing, explain means of assessing cough effectiveness, suggest alternative methods of airway clearance, and demonstrate proficiency in the instruction of the proper coughing techniques.
4. Demonstrate proper isolation procedures with an understanding of the specific isolation category and cause.
5. Make notations in the respiratory therapy progress notes section of the patient's chart for all appropriate situations.
6. Recognize indications, contraindications, and hazards / side effects for both chest physiotherapy and incentive spirometry therapy.
7. Demonstrate proficiency in the administration of chest physiotherapy and incentive spirometry

- therapy.
8. Describe all the various aerosolized medications administered by a respiratory care practitioner. Including normal dosage, drug category, hazard / side effects, action, indications, contraindications, and limitations.
 9. Demonstrate proficiency in drug administration via aerosol and MDI therapy.
 10. Demonstrate initiation, application, and changes of oxygen delivery devices during patient use.
 11. Perform oxygen therapy rounds.
 12. Discuss the rationale for specific oxygen delivery systems and be able to select and assemble the appropriate equipment necessary to carry out a respiratory care plan.
 13. Identify disposable humidifiers and explain their purpose, uses and safety systems.
 14. Properly assess the patient's subjective and objective response to oxygen therapy.
 15. Determine the FIO₂ of various oxygen delivery systems, after becoming familiar with oxygen analyzers and their appropriate use.
 16. Assess and evaluate the following information about a patient: arterial blood pressure, heart rate, respiratory rate, depth of breathing, skin color and condition, finger nail condition, posture, cough, and speech pattern.
 17. Demonstrate proper use of nebulizers and related delivery or therapeutic equipment during patient care and after thorough instruction and practice of the procedure.
 18. Describe goals, indications, contraindications, side effects, and hazards for various types of therapy administered to patients. This will include oxygen therapy, humidification therapy, and incentive spirometry therapy.
 19. Demonstrate proficiency in intermittent positive pressure breathing (IPPB) / aerosol therapy, including proper medication administration techniques and recognizing, indications, contraindications and hazards / side effects.
 20. Assemble the equipment utilized for airway care, be able to describe the functions of various pieces of equipment, and demonstrate proficiency in equipment use.
 21. Explain the importance of a patent airway, describe the procedures for maintaining a patent airway, and demonstrate proficiency in the maintenance of a patent airway.
 22. Describe the steps of an intubation procedure (both oral and nasal). Including indications, hazards / side effects, important anatomical features, patient monitoring techniques, and methods for evaluating the airway.
 23. Given opportunities, observe intubation procedures.
 24. Discuss and demonstrate proper cuff inflation techniques.
 25. Correctly perform cuff management on various patients having artificial airways.
 26. Observe tracheotomy care and perform the procedure when possible.
 27. Observe the surgical procedure of tracheotomy when accessible.
 28. Demonstrate proficiency with both in-line suctioning and sterile apparatus used for suctioning.
 29. Discuss and demonstrate the procedure of tracheobronchial / nasotracheal aspiration, including indications, patient preparation, equipment preparation, sterile technique, patient monitoring techniques, important time intervals, hazards / side effects and special problem situations.
 30. Attend any cardiac / respiratory arrests that are convenient to the clinical situation, to observe all techniques employed in an attempt to successfully resuscitate a patient. The student will monitor closely, the duties and actions of the respiratory care personnel.
 31. Demonstrate proficiency in ventilation via mask, ET tube, or tracheostomy tube.
 32. Perform cardiopulmonary resuscitation (CPR) on adult and pediatric patients.
 33. Demonstrate proficiency in the ability to accurately utilize, read, understand and correctly evaluate pulse oximetry readings and be able to make appropriate recommendations regarding these readings.
 34. Demonstrate proficiency in the ability to secure, and prepare the necessary equipment for sampling of arterial blood.
 35. Properly select a sample site (palpation and modified Allen's test) and secure an arterial sample of sufficient quantity for analysis.
 36. Ensure the proper transport method of the sample for analysis.
 37. Properly handle the sample after the puncture, and describe the rationale for post-sampling procedures (pressure to puncture site, and post clean up).
 38. Given a combination of the analyzed values, define the acid / base status and relate the acid /

base status and level of oxygenation to patient management.

39. The student will describe the concept of buffer base and base excess relative to the metabolic component of acid / base physiology.
40. Properly interpret any and all arterial blood gas results at each clinical session. This will include an interpretation of acid / base status and oxygenation status.
41. Satisfactorily perform any duties from the previous semester that he or she has been verified as competent to perform.
42. 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, 10th ed. Elsevier, 2013. ISBN 13: 978-0-323-08203-7
- Computer software: competency system by: DataArc

Reading Assignments from Egan's:

- Bedside Assessment of the Patient
- Airway Pharmacology
- Airway Management
- Humidity and Bland Aerosol Therapy
- Aerosol Drug Therapy
- Storage of Medical Gasses
- Medical Gas Therapy
- Lung Expansion Therapy
- Bronchial Hygiene Therapy
- Principles of Infection Control
- Patient Safety, Communication, and Record Keeping
- Arterial Puncture
- Noninvasive Positive Pressure Ventilation

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 75% 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:

The final exams will consist of both a written and practical assessment. The written exam will be given at the end of the semester. The practical exam will take place throughout the final weeks of the semester and consist of performing competencies in the respiratory laboratory. The competencies are based on select DataArc competencies.

Means of Assessment

Students will be assessed in the following methods: via clinical instructor evaluations affective evaluations, procedural competency evaluations, a practical exam completed in the laboratory at the college, and a final written exam in multiple choice format via the computer in Moodle Rooms.

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 affective 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	50%
Procedure Competency Evaluations	10%
Written exam	15%
Practical exam	25%

Grade Determination:

A	Student must excel with theoretical knowledge, excel in laboratory / clinical performance areas	92-100
B+	Student must show distinction with superior theoretical knowledge and in laboratory / practical performance areas	86-91.9
B	Student must show above average knowledge and an above average standard of achievement in laboratory / practical performance areas	80-85.9
C+	Student must meet and attain the standard of achievement with reasonable theoretical knowledge and laboratory / practical performance skills	75-79.9
F	Student fails to meet acceptable standards in classroom or laboratory / practical performance areas	<75
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 75%. 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:

See the department policy and procedure manual for the course attendance and lateness policy.

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 college catalogue.
6. 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 & Procedures Section found in the Student Handbook.
7. Academic Integrity
 - a. Refer to the Academic Integrity Subsection; found in the Academic Regulations, Academic Policies Section found in the Academic Policies & Regulations Area of the College Catalog
8. Other possible College, Divisional, or Departmental Policy Statements to be referenced
 - a. ADA statement.
 - i. Students with documented disabilities who require accommodations by the American with Disabilities Act (ADA) can request support services from the Office of Specialized Service of Bergen Community College.
<http://www.bergen.edu/Pages1/Pages/5175.aspx>
 - b. Sexual Harassment statement.
 - c. Statement on acceptable use of BCC technology.
 - d. Statement on the purpose and value of faculty office hours.
9. Student and Faculty Support Services
 - a. List support services, e.g., the Writing Center, the Math Lab, the Tutorial Center, Online Writing Lab (OWL), Office of Specialized Services, etc.
10. BCC 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.

Weekly Assignments / Objectives

Weekly topics should always include prior semester skills and notations in the respiratory care progress notes for all procedures performed.

Week	Topic/Activity
1	<ul style="list-style-type: none"> Review the assessment and evaluation of patients with various clinical conditions Review aerosol / humidity therapy that are used to deliver medication and bland aerosol to artificial airways. Review proper isolation procedures.
2	<ul style="list-style-type: none"> Discuss and review means of assessing cough effectiveness, suggest alternative methods of airway clearance, and demonstrate proficiency in the instruction of the proper coughing techniques.
3	<ul style="list-style-type: none"> Evaluate pulse oximetry results and make appropriate recommendations regarding results. Begin arterial punctures.
4	<ul style="list-style-type: none"> Review the rationale, initiation, application, and patient assessment of oxygen delivery devices. Determine the FIO₂ of various oxygen delivery systems observed during oxygen rounds. Discuss air-oxygen calculations
5	<ul style="list-style-type: none"> Review various aerosolized medications. Including normal dosage, drug category, hazard / side effects, action, indications, contraindications, and limitations. ABG review – respiratory and metabolic acid-base and status.
6	<ul style="list-style-type: none"> ABG review – oxygenation status
7	<ul style="list-style-type: none"> Demonstrate proficiency in drug administration via aerosol and MDI therapy.
8	<ul style="list-style-type: none"> Review and demonstrate administration of chest physiotherapy and incentive spirometry therapy. Discuss and review mucous clearance adjuncts
9	<ul style="list-style-type: none"> Review and observe ECG recording. Patient case study preparation: include review of assess oxygen delivery, O₂ content, and A-a DO₂ calculations.
10	<ul style="list-style-type: none"> Continue to practice ECG Begin patient application of non-invasive ventilation
11	<ul style="list-style-type: none"> Patient case study preparation: include review of respiratory and metabolic acid-base status. Continue to demonstrate application and modification of non-invasive ventilation
12	<ul style="list-style-type: none"> Review competencies from current and prior semester. Practical exam preparation.
13	<ul style="list-style-type: none"> Present case studies to clinical groups involving procedures learned and performed.
14	<ul style="list-style-type: none"> Present case studies Application of prior procedures performed
15	<ul style="list-style-type: none"> Present case studies Application of prior procedures performed

Note to Students: This course outline and is tentative and subject to change, depending upon the progress of the class.

Competency Topics from DataArc

These competencies are required to complete or be reevaluated this semester. It is the responsibility of each student to complete the competencies listed below. Students and instructors are encouraged to reinforce all past competencies introduced throughout the program.

Arterial Puncture	Hand washing	Set Up & Ventilation via ET Tube
Aerosol tracheostomy collar	Isolation	Small Volume Nebulizer

Chest Assessment	In-line Suctioning	Tracheotomy Care
Chest Physiotherapy	Metered Dose Inhaler	Transport With O2
Cuff Management	Mucus Clearance Devices	Vital Signs
Endotracheal Suctioning	Patient Assessment	
Extubation	Securing the Artificial Airway	

All students are required to purchase protective eyewear (goggles) and to wear masks when performing task that splashing of fluids could occur, such as, suctioning their patients. Reference: AARC Clinical Practice Guidelines on Suctioning.