

# COURSE SYLLABUS

<b>LAST REVIEW</b>	Spring 2021
<b>COURSE TITLE</b>	Clinic Practice II
<b>COURSE NUMBER</b>	RSCR 0239
<b>DIVISION</b>	Health Professions
<b>DEPARTMENT</b>	Respiratory Therapy
<b>CIP CODE</b>	51.0908
<b>CREDIT HOURS</b>	4
<b>CONTACT HOURS/WEEK</b>	Clinical: 12
<b>PREREQUISITES</b>	None
<b>COURSE PLACEMENT</b>	This course is part of a selective admission program. Students must be admitted to the Respiratory Therapy program to enroll in this course.

## COURSE DESCRIPTION

In this elective clinic class, students make clinical rounds with Respiratory Care Practitioners (RCP) and physicians. Activities are directed so that students gain familiarity with initiating respiratory therapy in a variety of adult-child acute care and rehabilitation settings. Emphasis is placed on professional clinical practice guidelines for basic therapies. Students will practice safe operation of equipment, and appropriate technology selection for desired therapeutic effects.

## PROGRAM ALIGNMENT

This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit:

[https://kansasregents.org/workforce\\_development/program-alignment](https://kansasregents.org/workforce_development/program-alignment)

## PROGRAM LEARNING OUTCOMES

1. Formulate the knowledge and critical reasoning skills necessary to pass the National Board for Respiratory Care Therapist Multiple Choice Exam.
2. Execute the variety of assessment and intervention skills necessary to provide respiratory care in the clinical setting at the entry Registered Respiratory Therapist level.
3. Integrate professional behaviors necessary at the entry Registered Respiratory Therapist level.

## TEXTBOOKS

<http://kckccbookstore.com/>

## **METHODS OF INSTRUCTION**

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom.

Methodology will be selected to best meet student needs.

## **COURSE OUTLINE**

- I. Clinical Practice Guidelines
  - A. Arterial blood sampling
  - B. Arterial blood gas analysis
  - C. Hemoximetry analysis
  - D. Electrolyte analysis
  - E. Endotracheal and nasotracheal suctioning of adults and children
  - F. Postural drainage and chest physiotherapy
  - G. Continuous pulse oximetry
  - H. Oxygen therapy in the home or extended care facility
  - I. Positive pressure ventilation
  - J. Positive airway pressure breathing
  - K. Emergent airway care
  - L. Assess response to bronchodilator therapy at point of care
  
- II. Monitoring Patients
  - A. Identify cardiac arrhythmias
  - B. Monitor cardiopulmonary status
  - C. Conscious sedation monitoring
  
- III. Cardiopulmonary Diagnostics
  - A. Quality control and maintenance of instruments
  - B. Blood gas analysis
  - C. Hemoximetry analysis
  - D. Electrolyte analysis
  - E. Manometers
  - F. Spirometers
  - G. Analyzers
  - H. Screening spirometers
    1. Expiratory volumes
    2. Expiratory flow rates
  - I. Cardiopulmonary laboratory techniques
    1. Arterial puncture sampling
    2. Arterial line sampling
    3. Ambulation with pulse oximetry
    4. Oxygen titration with pulse oximetry
    5. Nocturnal desaturation studies

## 6. Capnography

- IV. Cardiopulmonary Rehabilitation
  - A. Exercise prescription
  - B. Oxygen titration
  - C. 6-minute/12-minute walks
  - D. Dyspnea index scale
  - E. Perceived level of exertion
  - F. Target heart rate
  - G. Recovery vital signs post exertion
  
- V. Patient Instruction
  - A. Safe operation of oxygen equipment
  - B. Safe operation of aerosol equipment
  - C. Smoking cessation breathing techniques
  
- VI. Airway Maintenance
  - A. Stylette
  - B. Magill Forceps
  - C. Oral pharyngeal airway
  - D. Nasal pharyngeal airway
  - E. Endotracheal tubes
  - F. Cricoid pressure
  - G. Laryngoscope handles and blades
  - H. Suctioning
  - I. Securing artificial airways
  - J. Trach asepsis
  - K. Intubation assist
  - L. Check effectiveness of ventilation
    - 1. End tidal carbon dioxide detectors
    - 2. Tracheal breath sounds
    - 3. Lung breath sounds
    - 4. Epigastric sounds
  - M. Reposition tube and cuff pressure
  - N. Tracheostomy care
  
- VII. Positive Pressure Equipment
  - A. Continuous positive pressure breathing
  - B. Bag valve mask
  - C. Positive pressure breathing
  - D. Positive expiratory pressure breathing
  
- VIII. Clinical Data
  - A. Organize clinical technical data in medical record
  - B. Record patient response to procedures in medical record

- C. Communicate time management needs
- D. Respiratory care plans
- E. Patient instruction
- F. Oral reports
- IX. Clinical Calculations
  - A. Minute ventilation
  - B. Airway resistance
  - C. Dead space
  - D. I:E ratio
  - E. Respiratory cycle time
  - F. Delivery of oxygen
  - G. P/F ratio
  - H. P (A-a)O<sub>2</sub>
  - I. a/A ratio
- X. Drug Administration for Pulmonary Hygiene and Crisis Breathing
  - A. Delivery device
    - 1. High efficiency nebulizer
    - 2. Small volume medication nebulizer
    - 3. Large volume nebulizer
  - B. Response to medications and adverse reactions

### **COURSE LEARNING OUTCOMES AND COMPETENCIES**

Upon successful completion of this course, the student will:

- A. Apply respiratory therapy consistent with clinical practice guidelines.
  - 1. Reference clinical practice guidelines for respiratory care.
  - 2. Apply clinical practice guidelines for arterial blood sampling.
  - 3. Apply clinical practice guidelines for arterial blood analysis.
  - 4. Apply clinical practice guidelines for arterialized blood capillary sampling.
  - 5. Apply clinical practice guidelines for hemoximetry analysis.
  - 6. Apply clinical practice guidelines for electrolyte analysis.
  - 7. Apply clinical practice guidelines for endotracheal, oropharyngeal and nasotracheal suctioning.
  - 8. Apply clinical practice guidelines for postural drainage and chest physiotherapy.
  - 9. Apply clinical practice guidelines for continuous pulse oximetry.
  - 10. Apply clinical practice guidelines for oxygen therapy in the home and extended care.
  - 11. Apply clinical practice guidelines for positive pressure ventilation.
  - 12. Apply clinical practice guidelines for positive airway pressure breathing.
  - 13. Apply clinical practice guidelines for emergent airway care.
  - 14. Apply clinical practice guidelines for assessing response to bronchodilation therapy.
  - 15. Apply clinical practice guidelines for pulmonary rehabilitation.

16. Apply clinical practice guidelines for 12 lead ECG.
17. Apply clinical practice guidelines for managing artificial airways.
18. Apply clinical practice guidelines for bronchopulmonary hygiene procedure.

- B. Monitor patients.
  - 19. Identify cardiac arrhythmias.
  - 20. Monitor cardiopulmonary status.
  
- C. Collect cardiopulmonary data.
  - 21. Collect airway pressure data with manometer.
  - 22. Collect gas concentrations with analyzers.
  - 23. Collect expiratory volumes with a screening spirometer.
  - 24. Collect expiratory flow rates with a screening spirometer.
  - 25. Collect cardiopulmonary laboratory data by arterial puncture sampling.
  - 26. Collect cardiopulmonary laboratory data by arterial line sampling.
  - 27. Collect ambulation data with pulse oximetry.
  - 28. Collect oxygen titration data with pulse oximetry.
  - 29. Collect peak flow measurement.
  
- D. Instruct patients.
  - 30. Instruct patients on safe operation of oxygen equipment.
  - 31. Instruct patients on safe operation of aerosol equipment.
  - 32. Instruct patients on safe operation of perceived level of exertion.
  - 33. Instruct patients on safe operation of dyspnea index scale.
  - 34. Instruct patients on safe operation of target heart rate.
  - 35. Instruct patients on safe operation of recovery vital signs post exertion.
  - 36. Instruct patients on safe operation of dyspnea index scale.
  - 37. Instruct patients on safe operation of smoking cessation.
  - 38. Instruct patients on safe operation of breathing techniques.
  
- E. Maintain airway.
  - 39. Provide airway maintenance using a stylette.
  - 40. Provide airway maintenance using Magill Forceps.
  - 41. Provide airway maintenance using oropharyngeal airway.
  - 42. Provide airway maintenance using nasopharyngeal airway.
  - 43. Provide airway maintenance using endotracheal tubes.
  - 44. Provide airway maintenance using cricoid pressure.
  - 45. Provide airway maintenance using laryngoscope handles and blades.
  - 46. Provide airway maintenance securing artificial airways.
  - 47. Provide airway maintenance using trach asepsis.
  - 48. Provide airway maintenance using intubation assistance.
  - 49. Provide airway maintenance by checking effectiveness of ventilation.
  - 50. Provide airway maintenance by doing routine tracheostomy care.
  - 51. Provide airway maintenance by properly reposition or change and keeping appropriate cuff pressure in ETT and trach tube.

- F. Operate positive pressure equipment.
  - 52. Operate continuous positive pressure breathing equipment.
  - 53. Operate BiPAP equipment.
  - 54. Operate positive pressure ventilation equipment.
  - 55. Operate positive expiratory pressure breathing equipment.
  
- G. Record, report and review clinical data.
  - 56. Organize clinical data in the medical record.
  - 57. Record patient response to procedure in the medical record.
  - 58. Record patient respiratory care plans in the medical record.
  - 59. Give oral report on patients to other healthcare team members.
  - 60. Review radiograph studies in the patient record.
  
- H. Perform clinical calculations.
  - 61. Calculate minute ventilation.
  - 62. Calculate airway resistance.
  - 63. Calculate dead space.
  - 64. Calculate I:E ratio.
  - 65. Calculate respiratory cycle time.
  - 66. Calculate delivery of oxygen.
  - 67. Calculate P/F ratio.
  - 68. Calculate  $P(A-a)O_2$ .
  - 69. Calculate a/A ratio.
  - 70. Calculate target heart rate.
  
- I. Perform cardiopulmonary drug administration for acute care patients.
  - 71. Select appropriate drug delivery device to administer drugs.
  - 72. Check patient response to medications given for crisis breathing and pulmonary hygiene.

### **ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES**

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

## **COLLEGE POLICIES AND PROCEDURES**

*Student Handbook*

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

*College Catalog*

<https://www.kckcc.edu/academics/catalog/index.html>

*College Policies and Statements*

<https://www.kckcc.edu/about/policies-statements/index.html>

*Accessibility and Accommodations*

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.