

## Course Number and Title: RCT 252 Clinical Respiratory Care II

**Campus Location:**

Georgetown, Wilmington

**Effective Date:**

2021-51

**Prerequisite:**

RCT 251

**Co-Requisites:**

RCT 210, RCT 232

**Course Credits and Hours:**

3.00 credits

0.00 lecture hours/week

16.00 lab hours/week

**Course Description:**

This clinical course is a continuation of Clinical Respiratory Care I. The student applies more advanced respiratory care modalities under supervision. Emphasis is placed on bronchial hygiene techniques, care of patients with artificial airways, and introductory mechanical ventilation.

**Required Text(s):**

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

**Additional Materials:**

Instructor handouts All program and policy manuals/handbooks

**Schedule Type:**

Classroom Course

**Disclaimer:**

None

**Core Course Performance Objectives (CCPOs):**

1. Demonstrate infection control. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
2. Perform basic patient assessment. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
3. Demonstrate data management. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
4. Demonstrate effective professional communication. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
5. Demonstrate advanced patient assessment. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
6. Perform the delivery of oxygen therapy. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
7. Administer bronchial hygiene therapy. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
8. Implement secretion clearance and lung expansion therapy. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
9. Perform and demonstrate aerosol therapy. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
10. Deliver aerosolized medication therapy. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
11. Demonstrate positive pressure adjuncts to secretion clearance and lung expansion. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
12. Demonstrate chest physical therapy (CPT) and adjunctive equipment. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
13. Demonstrate cardiopulmonary resuscitation (CPR). (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
14. Perform airway management. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
15. Demonstrate airway maintenance and extubation. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)
16. Use manual resuscitators. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

**Measurable Performance Objectives (MPOs):**

Upon completion of this course, the student will:

1. Demonstrate infection control.
  1. Describe the importance of maintaining asepsis while performing routine patient care.
  2. Demonstrate proper hand washing technique.
  3. Maintain asepsis while performing respiratory therapy procedures.
  4. Identify different procedures for patient isolation and differentiate among them.
  5. Demonstrate proper isolation technique.
  6. Complete clinical performance competency for infection control.
2. Perform basic patient assessment.
  1. Describe the rationale for routine implementation of basic patient assessment procedures.
  2. Describe the patient characteristics that should be monitored through systematic observation techniques.
  3. Collect and interpret vital sign data.

4. Collect and interpret respiratory data obtainable through observation, auscultation, and palpation of the patient's chest.
5. Complete clinical performance competency for basic patient assessment.
3. Demonstrate data management.
  1. Describe the importance of recording and using the data that appears on a patient's chart.
  2. Review a patient's chart, and compile data that is pertinent to the prescribed therapy.
  3. Ensure that the correct procedure is performed on the correct patient.
  4. Collect and record the results of respiratory therapy administration on a patient's chart.
  5. Complete clinical performance competency for data management.
4. Demonstrate effective professional communication.
  1. Describe the importance of effective communication skills for respiratory therapy personnel.
  2. Explain to a patient the purpose and method of performing a respiratory therapy procedure and what is expected of the patient during the procedure.
  3. Improve patient rapport and cooperation through the effective use of communication skills.
  4. Communicate with other hospital personnel regarding patient welfare.
  5. Complete clinical performance competency for effective professional communication.
5. Demonstrate advanced patient assessment.
  1. Explain the rationale for assessment of ventilatory status.
  2. Describe the indications for the collection of an arterial blood sample.
  3. Explain the purpose of the Allen test.
  4. Perform the procedures required for arterial blood sampling.
  5. Obtain and interpret arterial blood gas results.
  6. Explain and interpret arterial blood gas results.
  7. Demonstrate the correct use of non-invasive monitoring tools in the clinical setting.
  8. Compile and interpret the information obtained through the use of non-invasive monitoring.
  9. Complete clinical performance competency for advanced patient assessment.
6. Perform the delivery of oxygen therapy.
  1. Describe the theoretical concepts involved in respiration.
  2. Explain the goals, hazards, and effectiveness of oxygen therapy.
  3. Describe the capabilities, limitations, and clinical usefulness of oxygen delivery devices.
  4. Describe the evaluation tools and techniques used for administration and evaluation of oxygen therapy.
  5. Compose essential information required to address the goals, hazards, and effectiveness of oxygen therapy.
  6. Given a clinical setting involving oxygen therapy, formulate a treatment plan to:
    1. Gather appropriate information
    2. Employ pertinent assessment modalities
    3. Identify goals, hazards and effectiveness of therapy
    4. Select equipment for optimal delivery of patient care
    5. Demonstrate effective communication skills and properly coach patients
    6. Modify care in response to changing patient conditions
    7. Document and/or report findings in accordance with hospital policy
  7. Complete clinical performance competency for oxygen therapy.
7. Administer bronchial hygiene therapy.
  1. Describe normal mucociliary clearance mechanisms.
  2. Delineate the pathophysiology of retained secretions.
  3. Explain etiologies and clinical manifestations of retained secretions.
  4. Complete clinical performance competency for bronchial hygiene therapy.
8. Implement secretion clearance and lung expansion therapy.
  1. Explain the terms appropriate for secretion clearance and lung expansion therapies.
  2. Describe the theoretical concepts of sustained maximal inspiration (SMI) therapy.
  3. Explain the goals, hazards, and effectiveness of SMI therapy.
  4. Describe the capabilities, limitations, and clinical usefulness of secretion clearance and lung expansion therapy.
  5. Describe the evaluation tools and techniques relating to the administration and evaluation of secretion clearance and lung expansion therapy.
  6. Detail the essential information required to address goals, hazards, and effectiveness of secretion clearance and lung expansion therapy.
  7. Given a clinical setting involving secretion clearance or lung expansion therapy formulate a treatment plan to:
    1. Gather appropriate information pertaining to SMI therapy
    2. Employ patient assessment modalities
    3. Identify goals, hazards, and effectiveness of therapy
    4. Select equipment for the optimal delivery of patient care
    5. Demonstrate effective communication skills and properly coach patients
    6. Modify care in response to changing patient conditions
    7. Document and/or report findings in accordance with hospital policy
  8. Complete clinical performance competency for secretion clearance and lung expansion therapy.
9. Perform and demonstrate aerosol therapy.
  1. Describe the theoretical concepts of aerosol therapy.
  2. Explain the goals, hazards, and effectiveness of aerosol therapy.
  3. Describe the capabilities, limitations, and clinical usefulness of aerosol therapy devices.
  4. Describe the evaluation tools and techniques relating to the administration and evaluation of aerosol therapy.
  5. Compose the essential information required to address goals, hazards, and effectiveness of aerosol therapy.
  6. Given a clinical situation involving aerosol therapy formulate a treatment plan to:
    1. Gather appropriate information pertaining to aerosol therapy
    2. Employ patient assessment modalities
    3. Identify goals, hazards, and effectiveness of therapy

4. Select equipment for the optimal delivery of patient care
5. Demonstrate effective communication skills and properly coach patients
6. Modify care in response to changing patient conditions
7. Document and/or report findings in accordance with hospital policy
7. Complete clinical performance competency for aerosol therapy.
10. Deliver aerosolized medication therapy.
  1. Describe the theoretical concepts of aerosolized medication therapy.
  2. Explain the goals, hazards, and effectiveness of aerosolized medication therapy.
  3. Describe the capabilities, limitations, and clinical usefulness of aerosolized medication therapy devices.
  4. Describe the evaluation tools and techniques relating to the administration and evaluation of aerosolized medication therapy.
  5. Compose the essential information required to address goals, hazards, and effectiveness of aerosolized medication therapy.
  6. Given a clinical setting involving aerosolized medication therapy, formulate a treatment plan to:
    1. Gather appropriate information pertaining to aerosolized medication therapy
    2. Employ patient assessment modalities
    3. Identify goals, hazards, and effectiveness of therapy
    4. Select equipment for the optimal delivery of patient care
    5. Demonstrate effective communication skills and properly coach patients
    6. Modify care in response to changing patient conditions
    7. Document and/or report findings in accordance with hospital policy
  7. Complete clinical performance competency for aerosolized medication therapy.
11. Demonstrate positive pressure adjuncts to secretion clearance and lung expansion.
  1. Differentiate between spontaneous breathing and positive pressure breathing (PPB).
  2. Describe the theoretical concepts of positive pressure breathing therapy.
  3. Explain the goals, hazards, and effectiveness of each PPB modality discussed.
  4. Describe the capabilities, limitations, and clinical usefulness of PPB therapy devices.
  5. Describe the evaluation tools and techniques relating to the administration and evaluation of PPB therapy.
  6. Compose the essential information required to address goals, hazards, and effectiveness of each PPB therapy discussed.
  7. Given a clinical setting involving intermittent positive pressure breathing (IPPB) therapy, demonstrate the ability to formulate a treatment plan to:
    1. Gather appropriate information pertaining to IPPB therapy
    2. Employ patient assessment modalities
    3. Identify goals, hazards, and effectiveness of therapy
    4. Select equipment for the optimal delivery of patient care
    5. Demonstrate effective communication skills and properly coach patients
    6. Modify care in response to changing patient conditions
    7. Document and/or report findings in accordance with hospital policy
  8. Complete clinical performance competency for positive pressure adjuncts to secretion clearance and lung expansion.
12. Demonstrate chest physical therapy (CPT) and adjunctive equipment.
  1. Explain the term CPT.
  2. Describe the theoretical concepts of CPT therapy.
  3. Explain the goals, hazards, and effectiveness of CPT therapy.
  4. Describe the capabilities, limitations, and clinical usefulness of CPT therapy devices.
  5. Describe the evaluation tools and techniques relating to the administration and evaluation of CPT therapy.
  6. Compose the essential information required to address goals, hazards, and effectiveness of CPT therapy.
  7. Given a clinical setting involving CPT therapy, formulate a treatment plan to:
    1. Gather appropriate information pertaining to CPT therapy
    2. Employ patient assessment modalities
    3. Identify goals, hazards, and effectiveness of therapy
    4. Select equipment for the optimal delivery of patient care
    5. Demonstrate effective communication skills and properly coach patients
    6. Modify care in response to changing patient conditions
    7. Document and/or report findings in accordance with hospital policy
  8. Complete clinical performance competency for CPT and adjunctive equipment.
13. Demonstrate cardiopulmonary resuscitation (CPR).
  1. Complete clinical performance competency for CPR.
14. Perform airway management.
  1. Describe common etiologies and clinical manifestations of upper airway obstruction.
  2. Explain the importance of and demonstrate techniques for maintaining a patent airway.
  3. In a clinical setting, identify and apply the indications, goals, hazards, means of evaluation of effectiveness, and proper insertion technique for equipment aimed at maintaining a patent airway.
  4. Define *artificial airway*.
  5. Describe and differentiate among artificial airways and adjunctive equipment for maintaining a patient airway.
  6. Examine the regulations set by the American National Standards Institute with regard to the construction of artificial airways.
  7. Complete clinical performance competency for airway management.
15. Demonstrate airway maintenance and extubation.
  1. In a clinical setting, compose and apply the indications, goals, hazards, means of evaluating effectiveness, and proper technique for tracheal aspiration.
  2. Describe and differentiate among equipment used for tracheal aspiration.
  3. Outline the purpose of and employ proper technique for inflation of an artificial airway cuff.
  4. Explain and identify hazards associated with inflation of an artificial airway cuff, and describe techniques to avoid or minimize these hazards.
  5. Describe and exhibit strategies for dealing with a malfunctioning artificial airway.

6. Compose the indications, goals, hazards, means of evaluation of effectiveness, and proper technique for removal of an artificial airway.
  7. Explain and identify the predisposing, decisive, and adjunctive factors that increase a patient's risk of post extubation laryngeal and/or tracheal complications.
  8. Describe the pathophysiologic alterations and clinical manifestations of laryngeal and/or tracheal complications post extubation, and demonstrate appropriate respiratory therapy to treat the same.
  9. Complete clinical performance competency for airway maintenance and extubation.
16. Use manual resuscitators.
1. List, describe, and identify the main components of a manual resuscitator.
  2. Differentiate among manual resuscitators in terms of their capabilities and clinical usefulness.
  3. Given a clinical setting,
    1. Choose the optimum manual resuscitator
    2. Verify proper function of the manual resuscitator
    3. Troubleshoot and/or correct malfunction
    4. Describe proper technique for manual ventilation
  4. Complete clinical performance competency for manual resuscitators.

**Evaluation Criteria/Policies:**

The grade will be determined using the Delaware Tech grading system:

90	-	100	=	A
80	-	89	=	B
70	-	79	=	C
0	-	69	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

**Core Curriculum Competencies (CCCs are the competencies every graduate will develop):**

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

**Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):**

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1. Apply theoretical information that leads to an appropriate action in the application or delivery of respiratory care procedures.
2. Perform technical skills in the implementation of respiratory care procedures within a plan of care.
3. Practice behaviors that are consistent with professional and employer expectations/requirements of their employees.

**Disabilities Support Statement:**

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.