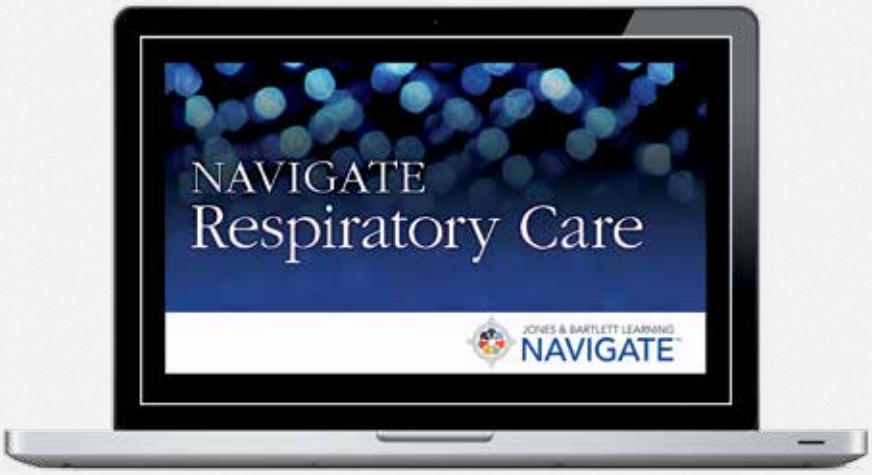
ONLINE CURRICULUM FOR RESPIRATORY CARE

NAVIGATE Respiratory Care

A New Paradigm for Respiratory Care Education

A Comprehensive, Online 10-Course Curriculum that Uniquely Prepares Students for a Rewarding Career as a Respiratory Therapist.



JONES & BARTLETT LEARNING
An Ascend Learning Company

www.navigaterespiratorycare.com

NAVIGATE Respiratory Care

How to Utilize Navigate Respiratory Care Courses in Your Classroom

- **Instructor-Led Course**—Incorporate course(s) into the class by assigning lectures as "homework" and save class time for discussions and activities.
- **Virtual Instructor-Led Course**—Easy to use course management tools allow instructors to assign lessons, additional reading, and assignments for scheduled delivery. Student progress and activity can be monitored within the course(s).
- **Remediation/Student Lab**—Courses can be assigned to students who are struggling and in need of remediation or can be placed in the lab for students to utilize for self-study.
- **Certification Review**—Because Navigate Respiratory Care courses are correlated to the RRT, CRT, and CSE exams, students can continue to monitor and strengthen their knowledge comprehension. The full curriculum could be purchased for use in a Certification Review course.

Want to Learn More?

For more information or to place an order, contact your Account Specialist at 1-800-832-0034 or visit go.jblearning.com/findarep. Find out how Navigate can improve student learning outcomes and provide efficient course management tools and analytics for instructors, by visiting www.navigaterespiratorycare.com and:

- Discover More About all 10 Courses
- Preview a Video Overview
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Increase Engagement & Learning Outcomes in Your Respiratory Care Courses!

Navigate Respiratory Care courses are comprehensive online courses with sequenced content and interactive learning activities. The course objectives are aligned to the National Board for Respiratory Care (NBRC) matrix for Certified Respiratory Therapist (CRT), Registered Respiratory Therapist (RRT), and Clinical Simulation Examination (CSE) certification exams. Each 3-credit Navigate Course is presented in 15 lessons and consists of 30 to 40 contact hours.

COURSES AVAILABLE

- Navigate Respiratory Care: Cardiopulmonary Anatomy & Physiology
- Navigate Respiratory Care: Patient Assessment
- Navigate Respiratory Care: Foundations of Respiratory Care
- Navigate Respiratory Care: Pharmacology
- Navigate Respiratory Care: Equipment & Procedures
- Navigate Respiratory Care: Mechanical Ventilation
- Navigate Respiratory Care: Cardiopulmonary Pathophysiology
- Navigate Respiratory Care: Cardiopulmonary Diagnostics
- Navigate Respiratory Care: Neonatal & Pediatric Care
- Navigate Respiratory Care: Special Topics & Specialties

Adopt Courses Individually, or **ALL 10** for a Full Curriculum Solution

Custom Bundles and Special Pricing Available

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Navigate Respiratory Care Courses Include:

Richly Interactive Course Lessons aligned to course objectives promote student engagement and retention. Developed using best practices in instructional design and learning theory, Interactive Course Lessons help students learn at their own pace, and in their own way.

Practice Activities give students an opportunity to try out new concepts in a safe learning environment. Featuring numerous interactive and informative learning resources and activities, they gauge understanding and help students study more effectively, and in less time.

Formative assessments offer students ample opportunities to practice building competence against learning objectives. Summative assessments ensure that students have complete mastery of course concepts as they move through the material.

Optional online course hosting with Moodle™ simplifies the management and delivery of curriculum and assessments to students enabling "anytime, anywhere" access to learning. Learn more about hosted course management tools at www.jblnavigate.com

FOR STUDENTS

Each **Navigate Respiratory Care** course contains robust material solidifying key, fundamental topics in respiratory care. Courses provide students with immediate access to evaluate their understanding of important concepts and objectives by easily toggling between narrative content, interactive activities, and assessments enabling them to process, synthesize, and retain course concepts in less time through rich media content.

Course Features

- Interactive Lecture with Audio
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Note Taking
- Discussion Questions
- Interactive Glossary
- Knowledge Checks
- Key Image Review
- Interactive Practice Activities
- Practice Quizzes
- Final Quiz
- Web Links and References

FOR INSTRUCTORS

Navigate Respiratory Care courses offer user-friendly, easy-to-use-editing tools to customize the course with additional content. An online control panel allows instructors to deploy and track online quizzes and homework effortlessly. A robust grade book facilitates detailed reporting on students' progress. Overall class statistics can be configured to provide weighted grading, custom scales, or generate statistical analysis on quiz questions.

Course Management Tools

- Syllabus and Course Objectives
- Flexible and Customizable with Easy-to-Use Editing Tools
- Assignment Management with Pre-Loaded Content and Exams
- Calendar and Announcements
- Activities and Assignments Mapped to Chapter Content
- Online Submission of Student Assignments
- Automatic Grading of Quantitative Assessments
- Reporting Features to Monitor Student Progress
- Surveys, Discussion Forums, and Chat Sessions
- Correlation Matrix

Cardiopulmonary Anatomy & Physiology

ISBN-13: 978-1-4496-7214-0 • © 2014

Course Description

Navigate Respiratory Care: Cardiopulmonary Anatomy & Physiology is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course examines the interaction among the body systems that affect respiration. It first covers cardiopulmonary anatomy and the circulatory systems that transport oxygen to the cells of the body. After examining oxygen transport in detail, the course covers diffusion and ventilation. Included are the other body organs and systems that are part of or affect respiration.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

As a future respiratory therapist, students will encounter many patients with respiratory problems who have diseases of other body systems. This course helps students to discover the interaction among the various body systems that affect respiration.

Course Objectives

1. Describes each structure of the cardiopulmonary respiratory system.
2. Discusses the function of each structure in respiration and cardiopulmonary circulation.
3. Defines ventilation and the pressures associated with gases during ventilation.
4. Summarizes gas exchange in the body and normal and abnormal ratios.
5. Explains lung volumes and capacities.
6. Discusses oxygen transport and normal and abnormal factors in oxygen delivery.
7. Describes oxygen transport calculations used by respiratory therapists.
8. Explains the transport of carbon dioxide throughout the blood.
9. Describes diffusion of gases throughout the body.
10. Examines the gas laws.
11. Relates neural control of the lungs to the process of respiration.
12. Identifies blood vessels and other structures involved in circulation.
13. Details the various circulations of blood in the body.
14. Discusses ventilation/perfusion and the causes and consequences of a mismatch.
15. Describes electrophysiology of the heart.
16. Examines acid-base balance.

Optional Textbooks to Accompany Course

Anatomy and Physiology for Health Professionals
by Moini
ISBN-13: 978-1-4496-2214-5 • © 2012

Respiratory Care: Principles and Practice, Second Edition
by Hess, et al.
ISBN-13: 978-0-7637-6003-8 • © 2012

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Patient Assessment

ISBN-13: 978-1-4496-7215-7 • © 2014

Course Description

Navigate Respiratory Care: Patient Assessment is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course introduces the student to all aspects of the patient encounter. The information ranges from the soft skills needed to achieve fruitful communication to the technical skills needed to perform all the tasks of patient assessment.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Patient Assessment will help students understand the various types of people they will encounter on the job, how to be successful in their interactions, and how to be competent in all required tasks.

Course Objectives

1. Discuss the important of accurate and complete patient charting.
2. Understand all aspects of the patient encounter.
3. Comprehend the impact of cultural differences on patient interaction.
4. Describe all aspects of the patient history.
5. Identify the ways to determine level of consciousness and to assess patient appearance.
6. Describe vital signs measurement.
7. Discuss inspection of the patient for signs of disease.
8. Describe what palpation can tell the respiratory therapist.
9. Identify the important aspects of percussion in patient assessment.
10. Describe auscultation as a patient assessment and how the respiratory therapist makes determinations based on the results.
11. Discuss cardiovascular and cardiopulmonary assessment and findings.
12. Identify the importance of pulse oximetry to respiratory therapy.
13. Discuss ECG tracings and what they indicate about cardiopulmonary disorders that may affect respiration.
14. Discuss the importance of clinical laboratory studies in treatment of respiratory disease.
15. Analyze how blood gas interpretation impacts respiratory disease findings and treatment.

Optional Textbooks to Accompany Course

Respiratory Care: Principles and Practice, Second Edition
by Hess, et al.
ISBN-13: 978-0-7637-6003-8 • © 2012

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Foundations of Respiratory Care

ISBN-13: 978-1-4496-7963-7 • © 2014

Course Description

Navigate Respiratory Care: Foundations of Respiratory Care is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course introduces the students to the basic science they will need to function as respiratory therapists. The physical and mechanical laws that form the foundation of respiratory care are examined in detail. Coverage includes the metric system, math, physics, chemistry, microbiology, and research and statistics.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Foundations of Respiratory Care will help students understand the physics, mathematics, and chemistry as related to respiratory care.

Course Objectives

1. Examine all aspects of the metric system and perform calculations relating to respiratory therapy.
2. Describe mathematics as used in respiratory care and understand the ways in which different mathematical methods are used to take measurements and make calculations.
3. Understand states of matter, work, and kinetic energy.
4. Identify how temperature conversions are made and examine thermodynamics, thermal energy, and temperature.
5. Describe gas laws and ideal gas laws and define Boyle's law, Charles' law, and Gay-Lussac's law.
6. Understand and apply Dalton's law of partial pressures to gas mixtures.
7. Examine Graham's law, Henry's law, and Fick's law and relate the ones that apply to diffusion and osmosis.
8. Explain the role of water vapor, humidity, and evaporation and how all three are useful in respiratory therapy.
9. Apply knowledge of Boyle's law, Charles' law, and Gay-Lussac's law to the behavior of gas under varying temperatures and pressures.
10. Describe and calculate patterns of flow, airway length, and resistance using Poiseuille's law and Reynold's number.
11. Discuss fluid entrainment and the Bernoulli principle, the Venturi effect, and Ohm's law in relation to respiratory care.
12. Compare compliance and elastance and define LaPlace's law, surface tension, and surfactant.
13. Understand chemistry in relation to respiratory therapy and in particular the Henderson-Hasselbalch equation.
14. Explain the aspects of microbiology that play an important role in respiratory disease and treatment.
15. Apply the scientific method to research and statistics in respiratory care.

Optional Textbooks to Accompany Course

Respiratory Care: Principles and Practice, Second Edition
by Hess, et al.
ISBN-13: 978-0-7637-6003-8 • © 2012

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Pharmacology

ISBN-13: 978-1-4496-7213-3 • © 2014

Course Description

Navigate Respiratory Care: Pharmacology is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course familiarizes students with the basic subsections of pharmacology. It covers pharmacodynamics and pharmacokinetics in detail and informs the student about types of respiratory medications, their use, precautions, and indications. The course also discusses the education of patients about medications and their use.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Pharmacology will familiarize students with the basic subsections of pharmacology. Students will learn the basic pharmacological principles and practices of respiratory care drugs with an emphasis on classification, routes of administration, dosages/calculations, and physiological interaction.

Course Objectives

1. Explains the importance of pharmacology to respiratory therapy and describes the drugs, routes of administration, and mechanisms of action of each class of drug.
2. Discusses underlying pathologies that require respiratory pharmacotherapy as well as the drugs used in those therapies.
3. Compares measurement systems and describes the calculation of dosages within each system.
4. Identifies adrenergic bronchodilators used in respiratory pharmacotherapy and describes the advantages and disadvantages of various drugs.
5. Identifies anticholinergic bronchodilators used in respiratory pharmacotherapy and describes the advantages and disadvantages of various drugs.
6. Discusses the use of mucolytic agents in respiratory pharmacotherapy and describes the advantages and disadvantages of use.
7. Identifies the corticosteroid drugs used in respiratory pharmacology and discusses the advantages and disadvantages of their use.
8. Explains the use of nonsteroidal drugs mainly as antiasthmatics and identifies the advantages and disadvantages of their use.
9. Identifies the indications for use of neuromuscular blocking agents, the routes of administration, and the advantages and disadvantages of specific drugs.
10. Recognizes the use of cardiovascular drugs and how their action helps in treatments of diseases that have respiratory implications.
11. Recognizes the need for diuretics in certain conditions related to or inherent in respiratory pharmacology.
12. Describes the role of antibiotics in respiratory therapy and related disorders.
13. Discusses the use of antimicrobials and vaccines in prevention and treatment of respiratory disorders.
14. Details how ACLS medications are used for conditions related to respiration.
15. Describes the conditions and treatments for various neonatal and pediatric respiratory disorders.

Optional Textbooks to Accompany Course

Cardiopulmonary Pharmacology for Respiratory Care
by Moini
ISBN-13: 978-1-4496-1560-4 • © 2012

Respiratory Care: Principles and Practice, Second Edition
by Hess, et al.
ISBN-13: 978-0-7637-6003-8 • © 2012

Want to Learn More?

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Equipment & Procedures

ISBN-13: 978-1-4496-7964-4 • © 2014

Course Description

Navigate Respiratory Care: Equipment & Procedures is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course introduces students to the many types of equipment used in respiratory care and how to use them in clinical practice. It discusses various procedures as well as safety and infection control to be used in any patient contact.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Equipment & Procedures provides students with essential knowledge of the equipment and techniques used in the treatment of cardiopulmonary disease, including basic knowledge and skills of airway care.

Course Objectives

1. Describe infection control particularly as it relates to the handling of equipment and the performance of procedures.
2. Discuss the role of therapeutic gases in the treatment of respiratory disorders and diseases.
3. Identify the indications for oxygen therapy.
4. Describe the various devices used for oxygen therapy.
5. Discuss the limitations of oxygen therapy.
6. Identify the importance of helium, oxygen, and carbon dioxide as therapeutic gases in respiratory therapy.
7. Explain the various therapies used in respiratory care.
8. Describe the indication and use of bland aerosol therapy.
9. Discuss the devices used in and the administration of aerosolized drugs in respiratory therapy.
10. Explain the therapies used to promote bronchial hygiene.
11. Describe lung expansion therapy and its indications for use.
12. Explain nasopharyngeal and oropharyngeal airway devices and how they are inserted and managed.
13. Discuss the management of intubation.
14. Explain the procedure performed in a tracheostomy and how patients with a trach are managed.
15. Describe the weaning and extubation procedures.

Optional Textbooks to Accompany Course

Equipment for Respiratory Care
by Volsko, Chatburn, and El-Khatib
ISBN-13: 978-1-4496-5283-8 • © 2015

Handbook of Respiratory Care
by Chatburn and Mireles-Cabodevila
ISBN-13: 978-0-7637-8409-6 • © 2011

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Mechanical Ventilation

ISBN-13: 978-1-4496-7965-1 • © 2014

Course Description

Navigate Respiratory Care: Mechanical Ventilation is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course encompasses the knowledge and understanding of the equipment, procedures, complications, indications, and weaning of mechanical ventilation. The student is guided step-by-step through indications for mechanical ventilation; how to initiate it; how to monitor various body systems while the patient is on mechanical ventilation; how to adjust it; and how to wean the patient. Specialty ventilators are covered for work on special cases or in home care.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Mechanical Ventilation provides students with essential knowledge of mechanical ventilation with emphasis on ventilator classification, methods, principles, and operational characteristics.

Course Objectives

1. Define respiratory failure and identify the tests and indications for mechanical ventilation.
2. Detail the structure of mechanical ventilators and how they operate.
3. Explain the different modes of ventilation and the use of each mode in respiratory care.
4. Discuss the appropriate use and types of noninvasive ventilation and understand the advantages and disadvantages of this practice.
5. Describe continuous positive airway pressure (CPAP) and how this noninvasive form of ventilation is used.
6. Understand all aspects of initiation of ventilation including needed indications, assessments, type of ventilator, and appropriate settings.
7. Determine adjustment of the ventilator based on patient response as well as the results of assessment tests.
8. Examine the types of monitoring needed for patients on mechanical ventilation and handle the consequences of adverse test results or poor patient response to ventilation.
9. Identify the monitoring of related body systems for signs of patient distress while on mechanical ventilation.
10. Describe the physiologic effects of mechanical ventilation.
11. Identify potential effects of mechanical ventilation including lung injury and other body system complications.
12. Describe lung protective strategies and avoidance of ventilator-associated pneumonia (VAP).
13. Discuss the process and protocols for weaning.
14. Examine the process of discontinuing mechanical ventilation and the success or failure of the procedure.
15. Explain the indication for the use of high-frequency ventilation as a specialty ventilator and describe specialty ventilators used in other situations as home care.

Optional Textbooks to Accompany Course

Handbook of Respiratory Care
by Chatburn and Mireles-Cabodevila
ISBN-13: 978-0-7637-8409-6 • © 2011

Respiratory Care: Principles and Practice, Second Edition
by Hess, et al.
ISBN-13: 978-0-7637-6003-8 • © 2012

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Cardiopulmonary Pathophysiology

ISBN-13: 978-1-4496-7966-8 • © 2014

Course Description

Navigate Respiratory Care: Cardiopulmonary Pathophysiology is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course reviews the pathophysiology of respiratory disease. The lessons are separated by disease with each lesson discussing etiology, diagnosis, treatment, and outlook. Some of the diseases will be encountered frequently but this course also prepares the student for rarer disorders that they may treat in the future.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Cardiopulmonary Pathophysiology provides students with essential knowledge of the etiology, pathogenesis, pathology, diagnosis, history, prognosis, manifestations, treatment, and detection of cardiopulmonary diseases.

Course Objectives

1. Identifies the advanced patient assessments that are essential to diagnosing respiratory diseases.
2. Describes the role of the respiratory therapist as patient educator and decision maker.
3. Discusses COPD and the role of the respiratory therapist in its treatment.
4. Defines and describes asthma and how it is treated and managed.
5. Describes bronchiectasis and the management of the disorder.
6. Discusses ALI and ARDS, its pathophysiology, and the protocols for treatment and management.
7. Explains the common infectious lung diseases, how they are diagnosed, treated, and managed.
8. Explains the relationship of pulmonary vascular diseases to patient respiratory status.
9. Describes the traumas and shock that affect respiration and how they are treated.
10. Discusses lung cancer and how it is treated and managed.
11. Describes how neuromuscular disorders affect respiration and how that situation is treated and managed.
12. Defines and explains cystic fibrosis, its clinical manifestations, and long-term management.
13. Identifies the distinguishing characteristics of laryngotracheobronchitis and epiglottitis and how they are treated.
14. Describes RDS, how it manifests itself, and how it is treated and managed.
15. Discusses the clinical manifestations, treatment, and management of BPD.

Optional Textbooks to Accompany Course

Pulmonary Function Testing
by Wanger
ISBN-13: 978-0-7637-8118-7 • © 2012

Respiratory Care: Principles and Practice, Second Edition
by Hess, et al.
ISBN-13: 978-0-7637-6003-8 • © 2012

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Cardiopulmonary Diagnostics

ISBN-13: 978-1-4496-7963-7 • © 2014

Course Description

Navigate Respiratory Care: Cardiopulmonary Diagnostics is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course covers the full range of cardiopulmonary indicators. Blood and hematology are discussed in sufficient detail to understand how test results indicate potential problems. The diagnostics of imaging the cardiopulmonary system is presented as is the ECG and its findings. In addition to other related tests, the student examines interventional cardiopulmonary procedures.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Cardiopulmonary Diagnostics provides students with essential knowledge of physical, radiological, hemodynamic, laboratory, and cardiopulmonary diagnostic assessments.

Course Objectives

1. Understand blood chemistry and hematology and how testing of blood yields significant cardiopulmonary information.
2. Describe the procedure for performing a chest X-ray and understand how to interpret the results.
3. Discuss chest X-ray abnormalities and their implications for the diagnosis of disease.
4. Examine imaging methods other than X-ray including CAT scan, MRI, and ultrasound.
5. Describe the pulmonary function test of spirometry, how it is performed, and what findings are obtained.
6. Identify how pulmonary function testing is used to measure lung volumes and capacities and examine procedures to perform the related tests such as plethysmography.
7. Discuss how pulmonary function testing is used to measure diffusing capacity and describe other specialized tests.
8. Explain interpretation of all pulmonary function tests.
9. Explain bronchoscopy as an interventional pulmonary procedure and the findings that can result.
10. Describe thoracentesis as an interventional pulmonary procedure, the purpose it serves, and the respiratory therapist's role in the performance of the procedure.
11. Explain chest tube insertion, placement, and removal.
12. Understand the performance of an ECG and advanced ECG reading and what they indicate.
13. Explain indications for 12-lead ECG, its findings, and interpretations.
14. Examine the process of hemodynamic monitoring and its purpose.
15. Describe the abnormalities seen in hemodynamic monitoring and relate the procedure to shock.

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by Wanger
ISBN-13: 978-0-7637-8118-7 • © 2012

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by Hess, et al.
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Neonatal & Pediatric Care

ISBN-13: 978-1-4496-7968-2 • © 2014

Course Description

Navigate Respiratory Care: Neonatal & Pediatric Care is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course provides students with essential knowledge of neonatal and pediatric cardiopulmonary care. The course lessons concentrate on the respiratory conditions of prematurity, how they are treated and managed, and the outcomes. Students will gain key clinical knowledge about treating acute or chronic respiratory diseases common to infant and pediatric populations.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Neonatal & Pediatric Care provides students with a full understanding of the special needs of neonates, infants, and children, including the conditions and diseases they face and the procedures necessary to the survival of this fragile population.

Course Objectives

1. Describe fetal development of cardiac and pulmonary systems.
2. Discuss fetal circulation and the transition to extrauterine life.
3. Identify the neonates who need resuscitation at birth.
4. Understand neonatal assessment and its findings.
5. Explain the special considerations needed in monitoring the neonate including temperature, oxygenation, electrolyte balance, and respiration.
6. Identify neonatal, infant, and pediatric diseases such as epiglottitis, cystic fibrosis, and laryngotracheobronchitis.
7. Describe additional neonatal, infant, and pediatric diseases such as meconium aspiration and apnea of prematurity, among others.
8. Examine congenital cardiac defects and their treatment and management.
9. Discuss respiratory procedures for the neonatal, infant, and pediatric population.
10. Understand the use of CPAP as a noninvasive procedure in the neonatal, infant, and pediatric population.
11. Identify the ways that airways are managed in the very young and, if intubation is necessary, how it is performed.
12. Discuss conventional infant and pediatric ventilation, how it is performed, how it is monitored, and potential adverse effects.
13. Understand high-frequency ventilation and home ventilation in the neonatal, infant, and pediatric population.
14. Describe adjunct therapies to mechanical ventilation in the neonatal, infant, and pediatric population.
15. Define ECMO and PLV and how they are used, when they are indicated, and how the patients are weaned.

Optional Textbooks to Accompany Course

Neonatal Respiratory Care Handbook
by Harrison
ISBN-13: 978-0-7637-5546-1 • © 2011

Respiratory Care: Principles and Practice, Second Edition
by Hess, et al.
ISBN-13: 978-0-7637-6003-8 • © 2012

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Special Topics & Specialties

ISBN-13: 978-1-4496-7969-9 • © 2014

Course Description

Navigate Respiratory Care: Special Topics & Specialties is one of the 10 online courses in the **Navigate Respiratory Care** curriculum. This course introduces students to topics such as ethical and legal considerations, communication skills, interprofessional education, nutritional support, cardiopulmonary rehabilitation, exercise for the respiratory patient, disaster management, home care, polysomnography, basic life support, ACLS, care of the elderly, end-of-life care, and the future career and evolving role of the respiratory therapist.

Course Content

- NBRC Correlation Matrix
- Course Objectives
- Interactive Lectures with Audio
- Interactive Practice Activities and Quizzes
- Icons to highlight important information—infection control, safety, caution, legal, and ethical
- Lesson Case Study
- Lesson Assignment
- Lesson Summary
- Lesson Discussion Questions
- Final Quiz
- Web Links and References

Course Outcome

Navigate Respiratory Care: Special Topics & Specialties covers a variety of topics that students will use throughout his or her career as a respiratory care therapist including emerging and specialty practices.

Course Objectives

1. Describe the foundations of ethical thinking and understand the role the therapist may have in committee participation.
2. Explain the role of nutrition support, assessment, and education in respiratory therapy.
3. Relate cardiopulmonary exercise to the patient's capabilities and to assessments made during exercise.
4. Define pulmonary rehabilitation and the therapist's role in providing and monitoring it.
5. Understand home care and the equipment and procedures needed.
6. Describe polysomnography and normal and disturbed sleep and how abnormalities are treated.
7. Identify the issues related to basic life support and resuscitation techniques.
8. Discuss the transition from basic life support to advanced cardiac life support.
9. Understand the role of the respiratory therapist in disaster management.
10. Describe care of the elderly and conditions and diseases prevalent in this population.
11. Understand ethical concerns of end-of-life care and identify the nature of palliative care.
12. Recognize the importance of communication skills and how to put them into practice.
13. Explain legal issues as they apply to healthcare workers.
14. List credentials available to respiratory therapists and understand the careers and support organizations available to respiratory therapists.
15. Describe the evolving role of the respiratory therapist and the expansion of duties.

Optional Textbooks to Accompany Course

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by Hess, et al.
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