

# RESPIRATORY CARE (RC)

## Course Descriptions

### **RC 100. Foundations of Respiratory Care. 3 Credit Hours.**

Foundations of Respiratory Care introduces students to the profession of respiratory care. The course will include the history of the profession, as well as the current and future roles of the respiratory care practitioner. The application of patient safety, communication, ethics, physical sciences, and microbiology to the field of respiratory care will be covered. This course will also include an overview of medical terminology.

Prerequisites: Reading Proficiency

### **RC 110. Cardiopulmonary Anatomy and Physiology. 3 Credit Hours.**

Cardiopulmonary Anatomy and Physiology is an in-depth study of the anatomy and physiology of the respiratory system. Pulmonary physiological principles discussed will include ventilation, perfusion, diffusion, and blood gas transport. The course will conclude with an overview of the anatomy and physiology of the cardiovascular system. (Credit is only allowed for either RC 110 or RTH 222.)

Prerequisites: Admission to the AAS Respiratory Care or BS Respiratory Care Program, BIO 208 with a minimum grade of "C", and Reading Proficiency

### **RC 120. Respiratory Care Practices I. 6 Credit Hours.**

Respiratory Care Practices I provides classroom instruction and laboratory practice of the respiratory care practices utilized to administer general respiratory care. Areas of concentration will include storage and delivery of medical gases, humidity and aerosol therapy, aerosol drug therapy, lung expansion therapy, and airway clearance therapy. (Credit is only allowed for either RC 120 or RTH 120.)

Prerequisites: Program Admission, BIO 208 with a minimum grade of "C", and Reading Proficiency

### **RC 125. Fundamentals of Respiratory Care. 6 Credit Hours.**

Fundamentals of Respiratory Care provides classroom instruction of the initial contact with and assessment of respiratory care patients. Diagnostic and therapeutic practices utilized to administer basic respiratory care will be discussed.

Prerequisites: Admission to the AAS Respiratory Care or BS Respiratory Care Program, BIO 208 with a minimum grade of "C", and Reading Proficiency  
Corequisites: RC 135

### **RC 130. Patient Assessment. 2 Credit Hours.**

Patient Assessment provides classroom instruction pertaining to the initial contact with and assessment of respiratory care patients. Topics to be covered include principles of infection control, obtaining a medical history, vital signs, pulse oximetry, advanced patient assessment techniques, and documentation. The course will conclude with information of some of the most common diagnostic tests used in respiratory care. (Credit is only allowed for either RC 130 or RTH 121.)

Prerequisites: Program Admission, BIO 208 with a minimum grade of "C" and Reading Proficiency

### **RC 135. Fundamentals of Respiratory Care Lab. 2 Credit Hours.**

Fundamentals of Respiratory Care Lab provides hands-on instruction and practice of the assessment and treatment of patients utilizing basic respiratory care procedures.

Prerequisites: Admission to the AAS Respiratory Care or BS Respiratory Care Program, BIO 208 with a minimum grade of "C", and Reading Proficiency  
Corequisites: RC 125

### **RC 140. Respiratory Pharmacology. 2 Credit Hours.**

Respiratory Pharmacology provides information regarding the pharmacologic agents used in treatment of cardiopulmonary diseases. The course addresses pharmacological principles as well as the indications and application of medications used in the treatment of cardiopulmonary diseases. (Credit is only allowed for either RC 140 or RTH 127.)

Prerequisites: Concurrent or prior enrollment in RC 110 with a minimum grade of "C", and Reading Proficiency

### **RC 150. Fundamentals of Respiratory Care II. 4 Credit Hours.**

Fundamentals of Respiratory Care II provides classroom instruction and laboratory practice of the respiratory care practices and procedures utilized to assess, diagnose, and treat patients with cardiopulmonary disease. Areas of concentration include arterial blood gas analysis and interpretation, clinical laboratory findings, capnography, assisting a physician during special procedures, and airway management. (Credit is only allowed for either RC 150 or RTH 125 and RTH 128.)

Prerequisites: RC 110, RC 125, and RC 135 with minimum grades of "C", and Reading Proficiency

### **RC 160. Mechanical Ventilation I. 4 Credit Hours.**

Mechanical Ventilation I provides classroom instruction and laboratory practice for providing positive pressure ventilation to patients through a variety of methods. Students will gain an understanding of initiating, assessing, and modifying various modes and settings. (Credit is only allowed for either RC 160 or RTH 126.)

Prerequisites: RC 110, RC 125, and RC 135 with minimum grades of "C", and Reading Proficiency

### **RC 170. Respiratory Care Clinical Practice I. 1 Credit Hour.**

Respiratory Care Clinical Practice I focuses on the application of general respiratory care principles in the hospital setting. Students receive a hospital orientation, assess patients, and provide general floor care that may include but is not limited to oxygen therapy, humidity and bland aerosol therapy, hyperinflation therapy, airway clearance therapies, and aerosolized medication therapy. (Credit is only allowed for either RC 170 or RTH 140.)

Prerequisites: RC 100, RC 110, RC 120, RC 130 all with minimum grades of "C", and Reading Proficiency

### **RC 180. Cardiopulmonary Diseases. 3 Credit Hours.**

Cardiopulmonary Diseases addresses the etiology, pathology, clinical manifestations, diagnosis, and treatment of various cardiopulmonary diseases. Students will learn to apply evidence-based guidelines to the treatment of cardiopulmonary disease. (Credit is only allowed for either RC 180 or RTH 220.)

Prerequisites: RC 125 and RC 140 with minimum grades of "C", and Reading Proficiency

### **RC 190. Respiratory Care Clinical Practice II. 1 Credit Hour.**

Respiratory Care Clinical Practice II will allow students more time to assess patients and apply general respiratory care principles in the hospital setting. The course will also include an introduction to the assessment and care of patients in the intensive care unit. (Credit is only allowed for either RC 190 or RTH 146.)

Prerequisites: RC 140, RC 150, RC 160, RC 170 all with minimum grades of "C", and Reading Proficiency

### **RC 199. Respiratory Care Review. 1 Credit Hour.**

Respiratory Care Review provides review and remediation of respiratory care knowledge and skills for Respiratory Care students who are re-entering the Respiratory Care Program.

Prerequisites: Program Coordinator Permission and Reading Proficiency

**RC 200. Adult Critical Care. 3 Credit Hours.**

Adult Critical Care provides the student an understanding of the assessment, diagnosis, and management of an adult patient who is critically ill. Information will include the interpretation of electrocardiograms, Advanced Cardiac Life Support (ACLS), hemodynamic monitoring, critical care medications, and end-of-life care. (Credit is only allowed for either RC 200 or RTH 221.)

Prerequisites: RC 180 with grade of "C" or higher, and Reading Proficiency

**RC 210. Mechanical Ventilation II. 4 Credit Hours.**

Mechanical Ventilation II provides classroom instruction and laboratory practice of advancing topics centered around invasive mechanical ventilation. Topics will include methods to improve oxygenation and ventilation, troubleshooting, graphics analysis, and weaning invasive mechanical ventilation. The course will provide discussion on advanced modes and settings, high-frequency ventilation, and long-term ventilation strategies. (Credit is only allowed for either RC 210 or RTH 223.)

Prerequisites: RC 150, RC 160, and RC 180 with grades of "C" or higher, and Reading Proficiency

**RC 220. Neonatal and Pediatric Respiratory Care. 3 Credit Hours.**

Neonatal and Pediatric Respiratory Care provides classroom instruction of the respiratory care practices and procedures utilized to assess, diagnose, and treat neonatal and pediatric patients with cardiopulmonary disease. The etiology, pathophysiology, clinical manifestations, diagnosis, and management of neonatal and pediatric cardiopulmonary diseases will be discussed. The non-invasive and invasive mechanical ventilation concepts for this patient population will also be reviewed. (Credit is only allowed for either RC 220 or RTH 131.)

Prerequisites: RC 180 and RC 190 with grades of "C" or higher, and Reading Proficiency

**RC 230. Respiratory Care Clinical Practice III. 2 Credit Hours.**

Respiratory Care Clinical Practice III will focus on the assessment of patients and application of respiratory care in the critical care setting. Specialty rotations may include, but are not limited to: neonatal and pediatric respiratory care, airway management, and long-term care. (Credit is only allowed for either RC 230 or RTH 240.)

Prerequisites: RC 180 and RC 190 with grades of "C" or higher, and Reading Proficiency

**RC 240. Respiratory Care Specialties. 3 Credit Hours.**

Respiratory Care Specialties provides an introduction to the specialty areas in which a respiratory care practitioner can work. (Credit is only allowed for either RC 240 or RTH 225.)

Prerequisites: RC 180 with a grade of "C" or higher, and Reading Proficiency

**RC 250. Respiratory Care Capstone. 4 Credit Hours.**

Respiratory Care Capstone provides an overview of the research process used in respiratory care. The course will also discuss leadership roles in the field. Students will be given an opportunity to complete a project centered around respiratory care leadership or research. The course will also provide students with an opportunity to practice for the National Board for Respiratory Care (NBRC) exams required to obtain the Registered Respiratory Therapist (RRT) credential. (Credit is only allowed for either RC 250 or RTH 228.)

Prerequisites: RC 200, RC 210, RC 220, RC 230 all with grades of "C" or higher, and Reading Proficiency

**RC 260. Respiratory Care Clinical Practice IV. 2 Credit Hours.**

Respiratory Care Clinical Practice IV focuses on the assessment of patients and the application of respiratory care in the critical care setting. Specialty rotations may include, but are not limited to: neonatal and pediatric respiratory care, airway management, and long-term care. (Credit is only allowed for either RC 260 or RTH 245.)

Prerequisites: RC 200, RC 210, RC 220, RC 230 all with grades of "C" or higher, and Reading Proficiency

**RC 300. Clinical Practice I. 1 Credit Hour.**

Clinical Practice I will serve as an introductory clinical experience focusing on the application of general respiratory care principles in the hospital setting. Students will receive an introduction to the hospital, have the ability to build patient assessment skills, deliver general respiratory care that includes, but is not limited to: oxygen administration and titration, delivery of humidity and bland aerosols, administration of medicated aerosols, lung expansion therapy, airway clearance therapy, and patient documentation.

Prerequisites: Admission to the BSRC program, and Reading Proficiency

**RC 310. Neonatal Respiratory Care. 2 Credit Hours.**

Neonatal Respiratory Care provides classroom instruction of the respiratory care practices and procedures utilized to assess, diagnose, and treat neonatal patients with cardiopulmonary disease. The etiology, pathophysiology, clinical manifestations, diagnosis, and management of neonatal cardiopulmonary diseases will be discussed.

Prerequisites: RC 150, RC 160, RC 180 all with grades of "C" or higher, and Reading Proficiency

**RC 320. Pediatric Respiratory Care. 2 Credit Hours.**

Pediatric Respiratory Care provides classroom instruction of the respiratory care practices and procedures utilized to assess, diagnose, and treat pediatric patients with cardiopulmonary disease. The etiology, pathophysiology, clinical manifestations, diagnosis, and management of pediatric cardiopulmonary diseases will be discussed.

Prerequisites: RC 310 and RC 380 with grades of "C" or higher, and Reading Proficiency

Corequisites: RC 330

**RC 330. Neonatal and Pediatric Respiratory Care Lab. 1 Credit Hour.**

Neonatal and Pediatric Respiratory Care Lab provides laboratory instruction and practice of assessment skills, use of equipment, and treatment modalities utilized in the care of the neonatal and pediatric patients with cardiopulmonary disorders.

Prerequisites: RC 310 and RC 380 with grades of "C" or higher, and Reading Proficiency

Corequisites: RC 320

**RC 340. Clinical Practice II. 1 Credit Hour.**

Respiratory Care Clinical Practice II will provide additional opportunities for students to build their skills in patient assessment and the administration of basic respiratory care. Students will additionally be exposed to the step-down areas of the hospital to observe airway management and non-invasive positive pressure ventilation applied at the bedside.

Prerequisites: RC 125, RC 135, RC 140, and RC 300 all with grades of "C" or higher, and Reading Proficiency

**RC 380. Clinical Practice III. 1 Credit Hour.**

Respiratory Care Clinical Practice III will serve as an introduction to the critical care areas of the hospital and providing respiratory care to the critically ill patient.

Prerequisites: RC 150, RC 160, RC 180, and RC 340 all with grades of "C" or higher, and Reading Proficiency

**RC 400. Clinical Practice IV. 2 Credit Hours.**

Clinical Practice IV focuses on providing all aspects of respiratory care in the critical care setting. Specialty rotations may include, but are not limited to emergency care, airway management, neonatal and pediatric respiratory care, and long-term acute care.

Prerequisites: RC 310, RC 380, and RC 240 all with grades of "C" or higher, and Reading Proficiency

**RC 410. Respiratory Care Management. 3 Credit Hours.**

Respiratory Care Management will focus on the study of management principles and problems as they relate to respiratory care and the management of the department, hospital, service organization, and health care programs. Prerequisites: RC 200, RC 210, RC 320, and RC 400 all with grades of "C" or higher, and Reading Proficiency

**RC 420. Respiratory Care Research. 3 Credit Hours.**

Respiratory Care Research will discuss the research problems and methods utilized in respiratory care. Strategies for literature review, development of a study idea, and the publishing of a research study will be reviewed. Prerequisites: RC 200, RC 210, RC 320, and RC 400 all with grades of "C" or higher, and Reading Proficiency

**RC 430. Health Education and Disease Management. 3 Credit Hours.**

Health Education and Disease Management examines the role of the respiratory therapist as an educator. Community health education, health promotion, and formal education will also be reviewed. The course will include disease management techniques shown to improve quality of life through the education of patients and other care providers. Prerequisites: RC 200, RC 210, RC 320, and RC 400 all with grades of "C" or higher, and Reading Proficiency

**RC 440. Respiratory Care Capstone. 1 Credit Hour.**

Respiratory Care Capstone will provide an opportunity for students to design a research study that impacts evidence-based respiratory care practice, education, or administration. The course will include preparation for the National Board for Respiratory Care (NBRC) board exams to obtain the Registered Respiratory Therapy (RRT) Credential. Prerequisites: RC 200, RC 210, RC 320, and RC 400 all with grades of "C" or higher, and Reading Proficiency

**RC 450. Clinical Practice V. 3 Credit Hours.**

Clinical Practice V provides the student an opportunity to complete a clinical externship. Clinical hours will be scheduled and completed alongside a designated clinical preceptor at a chosen facility. The focus of this course will be for the student to demonstrate proficiency in all aspects of respiratory care and prepare them for their transition from student to registered respiratory therapist. Specialty rotations may include but are not limited to: neonatal and pediatric respiratory care, airway management, emergency care, bronchoscopy, and long-term acute care. Prerequisites: RC 200, RC 210, RC 330, RC 320, RC 400 all with grades of "C" or higher, and Reading Proficiency