# Allied Health: Respiratory Care (AHRC)

## Courses

**AHRC 140 Respiratory Care Clinic I**
Credits: 4
Term: (S)
Prerequisite: Completion of first semester of the Respiratory Therapy program
Students will gain knowledge through supervised experiences in hospital patient care, techniques, and equipment. Emphasis is on patient contact, medical gases, hyperinflation, equipment, percussion, humidity and aerosol therapy, airway management, and secretion management. Safety and environmental awareness will be covered in all clinical courses.

**AHRC 150 Respiratory Care Laboratory I**
Credits: 1
Term: (F)
Prerequisite: Acceptance into the Respiratory Therapy program
Basic clinical competencies taught in AHRC 170 are studied in a laboratory setting. Peer and instructor review of competencies included. Laboratory experience in the areas of medical gas therapy, aerosol therapy, humidification therapy, hyperinflation devices and chest physical therapy. An introduction to infection control, body mechanics, gas analyzers, artificial airways, manual resuscitators, secretion removal, and safety and environmental awareness. This course is in continuation with AHRC 250 the following spring semester.

**AHRC 152 Respiratory Care**
Credits: 3
Term: (F)
Prerequisite: Acceptance into the Respiratory Therapy program
The course is an introduction course to the field of Respiratory Care. The topics covered are essential for the student to enter the clinical portion of the Respiratory Therapist Program. Course content includes gases, the field of Respiratory Care as it relates to the entire health care delivery system, medical terminology, communication, ethics, effects of tobacco on health, and respiratory medications.

**AHRC 155 Respiratory Physiology**
Credits: 3
Term: (F)
Prerequisite: Acceptance into the Respiratory Therapy program
Respiratory Physiology covers anatomy and physiology of the cardio-pulmonary systems. Topics studied are blood, the heart, vessels, respiratory structure, the physics of gas pressure, ventilation, regulation of ventilation, O2 and CO2 transport, ventilation and perfusion balance, acid-base balance, and interpretation of arterial blood gases.

**AHRC 160 Pharmacology for Respiratory Diseases**
Credits: 2
Term: (S)
Prerequisite: Completion of first semester of the Respiratory Therapy program
This course covers the concepts and principles of pharmacology required in the practice of respiratory care, including medications, actions, dosages, routes of administration, and adverse reactions. Topics include patient education of medication delivery devices, patient monitoring devices, utilization techniques, and the standards for therapeutic efficacy in relation to asthma, chronic obstructive pulmonary disease, and smoking cessation.

**AHRC 170 Respiratory Care Techniques and Procedures I**
Credits: 5
Term: (F)
Prerequisite: Acceptance into the Respiratory Therapy program
Knowledge and skills taught will provide students with the theories, principles, and experience in the areas of medical gas therapy and aerosol and humidification therapy in the use of hyperinflation devices and chest physical therapy. An introduction to infection control, body mechanics, gas analyzers, artificial airways, manual resuscitators, secretion removal, and safety and environmental awareness will be studied.

**AHRC 171 Respiratory Care Techniques and Procedures II**
Credits: 5
Term: (S)
Prerequisite: Completion of the first semester of the Respiratory Therapy program
Knowledge and skills taught will provide students with the theories, principles, and experience in the areas of adult and infant mechanical ventilation. Ventilators covered include but are not limited to: Respironics V60 & BiPAP Vision, Puritan Bennett 840, Hamilton Galileo Gold, and Sensormedics 3100A High Frequency Oscillator. Other areas such as arterial blood gas techniques, transcutaneous gas monitoring, hyperbaric oxygen therapy, mixed gas therapy, discontinuance of mechanical ventilation, troubleshooting during mechanical ventilation, techniques of ventilation, ventilator waveforms and high frequency ventilation will also be investigated.

**AHRC 180 Ventilator Management**
Credits: 3
Term: (S)
Prerequisite: Completion of the first semester of the Respiratory Therapy program
Ventilator Management prepares Respiratory Therapist students to care for the respiratory needs of adult patients in the intensive care setting. Content includes: relating physiologic measurements to patients' ventilation and oxygenation status, establishing the need for mechanical ventilation, selecting initial ventilator parameters and settings, assessing and modifying ventilator parameters and settings, monitoring mechanically ventilated patients, physiologic effects and complications of mechanical ventilation, and weaning from ventilators.

**AHRC 240 Respiratory Care Clinic III**
Credits: 5
Term: (F)
Prerequisite: Completion of the second semester of the Respiratory Therapy program
Students will be introduced to and then gain competency in a supervised in-hospital practice of advanced therapeutic and diagnostic Respiratory Therapy procedures including pulmonary function testing, arterial blood gases, intubations, continuing education, pulmonary rehabilitation, newborn and adult intensive care, and supervisory management. This course with AHRC 241 extends through two semesters.

**AHRC 241 Respiratory Care Clinic IV**
Credits: 5
Term: (S)
Prerequisite: Completion of the third semester of the Respiratory Therapy program
Students will be introduced to and then gain competency in a supervised in-hospital practice of advanced therapeutic and diagnostic Respiratory Therapy procedures including pulmonary function testing, arterial blood gases, intubations, continuing education, pulmonary rehabilitation, newborn and adult intensive care, and supervisory management. This course with AHRC 240 extends through two semesters.

**AHRC 245 Respiratory Care Clinical Seminar I**
Credits: 1
Term: (F)
Prerequisite: Completion of the second semester of the Respiratory Therapy program
The purpose for this course is to provide students with an opportunity to share significant clinical experiences, to present clinical problems, to practice communication skills, and to participate in student in-services. The student will learn to succeed on the NBRC Clinical Simulation Examination and participate in taking the NBRC comprehensive self-assessment exam. Complete job-seeking skills will be taught. This course is concurrent with AHRC 240 Respiratory Care Clinic III.

**AHRC 246 Respiratory Care Clinical Seminar II**
Credits: 1
Term: (S)
Prerequisite: Completion of the third semester of the Respiratory Therapy program
The purpose for this course is to provide students with an opportunity to share significant clinical experiences, to present clinical problems, to practice communication skills, and to participate in student in-services. The student will learn to succeed on the NBRC Clinical Simulation Examination and participate in taking the NBRC comprehensive self-assessment exam. Complete job-seeking skills will be taught. This course is concurrent with AHRC 241 Respiratory Care Clinic IV.

**AHRC 250 Respiratory Care Laboratory II**
Credits: 1
Term: (S)
Prerequisite: Completion of the first semester of the Respiratory Therapy program
A continuation of AHRC 150 with emphasis on adult critical care. Clinical competencies taught in AHRC 171 are studied in a laboratory setting. Peer and instructor review of competencies included. Mechanical Ventilator training is covered including; initiation and discontinuance of mechanical ventilation, troubleshooting during mechanical ventilation, techniques of ventilation, ventilator waveforms. Other areas such as arterial blood gas techniques, noninvasive gas monitoring and high frequency ventilation will also be covered.

**AHRC 251 Hemodynamic Monitoring**
Credits: 4
Term: (F)
Prerequisite: Completion of the second semester of the Respiratory Therapy program
Hemodynamic Monitoring covers topics about the circulatory system necessary for the Respiratory Therapist to work in adult intensive care settings. Course content includes: cardiac dysrhythmias and management of the circulatory system based on hemodynamic measurements.

**AHRC 254 Pulmonary Assessment**
Credits: 3
Term: (F)
Prerequisite: Acceptance into the Respiratory Therapy program
This course covers diagnostic techniques and procedures including interview and history taking, chest assessment, chest radiology, laboratory tests, arterial blood gases and an introduction to pulmonary function testing. This information is used to investigate pulmonary diseases.

**AHRC 262 Neonatal Respiratory Care**
Credits: 3
Term: (F)
Prerequisite: Completion of the second semester of the Respiratory Therapy program
Neonatal Respiratory Care is an infant intensive care course. Topics studied are fetal to neonatal transition, assessment of the newborn, cardiopulmonary disorders of the newborn and respiratory therapeutic procedures for the newborn.

**AHRC 264 Alternate Sites for Respiratory Care**
Credits: 2
Term: (S)
Prerequisite: Completion of the third semester of the Respiratory Therapy program
Respiratory Therapy is performed in many sites outside of the traditional medical center setting. This course will provide the student with the knowledge and practice of Respiratory Therapy in pulmonary rehabilitation, home care, pulmonary function, sleep disorders, exercise physiology, management and subacute care skilled nursing facilities.

**AHRC 281 Respiratory Law and Ethics**
Credits: 3
Term: (S)
Prerequisite: Completion of third semester of Respiratory Therapy program.
This Respiratory Therapy-specific ethics course focuses on the theories of ethical decision making as it applies to: scope of practice, informed consent, confidentiality, discrimination, conflicts of interest, illegal or unethical acts, fraud, research, and more.

**AHRC 291 Special Topics: Community Outreach**
Credits: 1
Term: (S)
Prerequisite: Completion of third semester of Respiratory Therapy program.
This special topics course focuses on a community outreach and service project to promote respiratory health and/or support non-profit respiratory-related organizations.