

# RET: Respiratory Care Courses

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## **RET 3028 Foundations of Respiratory Therapy**

College of Health, Department of Health Sciences & Admin

3 sh (may not be repeated for credit)

Prerequisite: BSC 1085/L AND BSC 1086/L AND CHM 2045/L AND MCB 1000/L AND PSY 2012 AND STA 2023

Co-requisite: RET 3028L

This lecture-based course offers a comprehensive introduction to the respiratory care profession. It provides theory and application of physics, chemistry, basic therapeutics, and disease management for respiratory therapists. This course focuses on the specific procedures and techniques used by respiratory care practitioners. It also covers infection control, therapeutic devices, patient assessment skills, medical gas administration, aerosol drug delivery, and an introduction to medical terminology using proper written and oral communication methods to prepare students for clinical practice.

## **RET 3028L Foundations of Respiratory Therapy Lab**

College of Health, Department of Health Sciences & Admin

1 sh (may not be repeated for credit)

Prerequisite: BSC 1085/L AND BSC 1086/L AND CHM 2045/L AND MCB 1000/L AND PSY 2012 AND STA 2023

Co-requisite: RET 3028

This lab-based course reinforces understanding of the role of the respiratory care practitioner within the clinical setting. Emphasis is placed on correct setup and application of equipment, techniques, and therapies for respiratory care. Activities include medical gas administration, patient assessment skills, respiratory therapeutics, patient safety techniques, blood gas analysis, airway management equipment, lung expansion and bronchial hygiene devices, and humidification. Clinical skills and competencies will be demonstrated through live and virtual lab/simulation exercises.

## **RET 3266 Fundamentals of Mechanical Ventilation**

College of Health, Department of Health Sciences & Admin

3 sh (may not be repeated for credit)

Prerequisite: RET 3884

Co-requisite: RET 3266L

This lecture-based course provides an in-depth knowledge of theory, set-up, operation, and management of mechanical ventilators and related equipment. Principles and application of invasive and noninvasive ventilation will be explored. This course will cover the history and theory of mechanical ventilation, modes of ventilatory support, equipment implementation, patient monitoring techniques, ventilator management approaches, discontinuation strategies, and troubleshooting.

## **RET 3266L Fundamentals of Mechanical Ventilation Lab**

College of Health, Department of Health Sciences & Admin

1 sh (may not be repeated for credit)

Prerequisite: RET 3884

Co-requisite: RET 3266

This lab-based course reinforces the principles, application, and management of mechanical ventilation by a respiratory care practitioner in a critical care setting. Emphasis is placed on cutting-edge ventilatory modes, noninvasive equipment, critical care monitoring technology, alternative patient management methods, and adjunctive therapies. Clinical skills and competencies will be demonstrated through live and virtual lab/simulation exercises.

## **RET 3354 Cardiopulmonary Pharmacotherapy**

College of Health, Department of Health Sciences & Admin

3 sh (may not be repeated for credit)

This lecture-based course is an introduction to an integrated, case-based evaluation of the physiology, pathophysiology, and pharmacology in the treatment and management of cardiopulmonary disorders. Students will study principles, practical uses, and interaction of pharmacological agents and their relationship to disease. Topic emphasis will be on using a whole-system s approach to patient care and the use of pharmacology in cardiopulmonary disease management.

## **RET 3445 Cardiopulmonary Diseases & Diagnostics**

College of Health, Department of Health Sciences & Admin

3 sh (may not be repeated for credit)

Prerequisite: RET 3884

Co-requisite: RET 3445L

This lecture-based course focuses on cardiopulmonary conditions, disease states, practices, and special procedures encountered in hospital, outpatient, and rehabilitation settings. Students will differentiate the etiology, clinical manifestations, pathogenesis, lab data, and treatment of common cardiopulmonary disorders. Emphasis is placed on diagnostics and therapeutic procedures for acute and chronic cardiopulmonary diseases. Problem-based learning will be used to develop comprehensive approaches to the practice of cardiorespiratory care.

## **RET 3445L Cardiopulmonary Diseases & Diagnostics Lab**

College of Health, Department of Health Sciences & Admin

1 sh (may not be repeated for credit)

Prerequisite: RET 3884

Co-requisite: RET 3445

This lab-based course reinforces standard methodologies used to diagnose and monitor cardiopulmonary diseases. Students will develop foundational knowledge to identify indications, utilize equipment, and interpret findings of advanced cardiopulmonary diagnostic tests that assess different body systems. Emphasis is placed on technical aspects as well as disease presentation. Clinical competencies include pulmonary function and gas analysis equipment, polysomnography and sleep disorders, metabolic and exercise testing, ultrasound, bronchoscopy, and echocardiography. Clinical skills and competencies will be demonstrated through live and virtual lab/simulation exercises.

**RET 3448 Advanced Therapeutics & Patient Monitoring Concepts in Respiratory Therapy**

College of Health, Department of Health Sciences & Admin

2 sh (may not be repeated for credit)

Prerequisite: RET 3885

This lecture-based course reinforces advanced topics in clinical care expressed through a holistic approach to the monitoring of cardiopulmonary patients. Emphasis is placed on the etiology of complex illness and a systems-oriented approach to diagnosis, management, and treatment in the patient care setting. This course will cover monitoring modalities commonly utilized in respiratory care, analysis of lab values and their significance, various modalities of positive pressure ventilation as well as adjunct measurement tools that the respiratory therapist will encounter during clinical practice.

**RET 3487 Cardiopulmonary Anatomy & Physiology**

College of Health, Department of Health Sciences & Admin

3 sh (may not be repeated for credit)

This lecture-based course focuses on cardiopulmonary anatomy and physiology essential to the practice of respiratory care. Emphasis is placed on normal and clinical physiological functions of the cardiovascular and pulmonary systems. Topics include cardiorespiratory functions, ventilatory mechanics, regulation of breathing, gas transport, acid-base balance, the cardiac cycle, hemodynamics, and diagnostic procedures used to evaluate these systems.

**RET 3493 Patient Assessment**

College of Health, Department of Health Sciences & Admin

3 sh (may not be repeated for credit)

Prerequisite: BSC 1085/L AND BSC 1086/L AND CHM 2045/L AND MCB 1000/L AND PSY 2012 AND STA 2023

Co-requisite: RET 3493L

This lecture-based course will cover the fundamentals of cardiopulmonary assessment. This course introduces the role of the respiratory care practitioner in promoting a positive patient encounter. Learners will be introduced to skills that support a complete patient examination through the evaluation of medical records, physical findings, laboratory data, pulmonary function testing, imaging, hemodynamic monitoring, as well as diagnostic and therapeutic interventions.

**RET 3493L Patient Assessment Lab**

College of Health, Department of Health Sciences & Admin

1 sh (may not be repeated for credit)

Prerequisite: BSC 1085/L AND BSC 1086/L AND CHM 2045/L AND MCB 1000/L AND PSY 2012 AND STA 2023

Co-requisite: RET 3493

This lab-based course reinforces the role of the respiratory care practitioner throughout a cardiopulmonary assessment. Emphasis is placed on correct clinical skills that support a complete patient examination. Activities include the assessment of medical records, physical findings, laboratory data, pulmonary function tests, medical images, hemodynamic monitoring data, as well as the evaluation of diagnostic and therapeutic interventions. Clinical skills and competencies will be demonstrated through live and virtual lab/simulation exercises.

**RET 3884 Clinical Practicum I**

College of Health, Department of Health Sciences & Admin

3 sh (may not be repeated for credit)

Prerequisite: BSC 1085/L AND BSC 1086/L AND CHM 2045/L AND MCB 1000/L AND PSY 2012 AND STA 2023

This clinical practice course focuses on the application of basic therapeutic techniques and procedures. Clinical practice courses require the student to integrate theory and lab/simulation training in the patient care setting. This course provides supervised entry-level clinical experience via assigned rotations at medical facilities. Clinical competencies include clinical documentation, patient assessment, patient safety techniques, respiratory therapeutics and diagnostics, blood gas analysis, medical gas and medication administration, and airway care within the scope of practice for respiratory care. Students will demonstrate, through performance evaluations, clinical competence and novice proficiency of patient care in a clinical setting.

**RET 3885 Clinical Practicum II**

College of Health, Department of Health Sciences & Admin

3 sh (may not be repeated for credit)

Prerequisite: RET 3884

This clinical practice course further develops both basic and advanced skills required in the intensive care of the cardiopulmonary patient. Clinical practice courses require the student to integrate theory and lab/simulation training in the patient care setting. This course provides supervised clinical experience in the critical care units via assigned rotations at medical facilities. Topics include continuous Clinical Practicum I duties, airway care skills, mechanical ventilation management, patient stabilization techniques, invasive and noninvasive monitoring, hemodynamic evaluations, and cardiopulmonary diagnostics within the scope of practice for respiratory care. Students are also given the opportunity to begin developing their neonatal-pediatric critical care skills. Students will demonstrate, through performance evaluations, clinical competence and appropriate levels of critical care knowledge in a clinical setting.

**RET 4616 Professional Healthcare Presence: Leadership, Administration, & Education**

College of Health, Department of Health Sciences & Admin

2 sh (may not be repeated for credit)

Prerequisite: RET 3885

This lecture-based course explores leadership qualities, administrative skills, and educational techniques appropriate to the advancement of the respiratory therapist. It introduces students to leadership theories and perspectives in healthcare and provides a foundation for future healthcare leaders. Additionally, students will develop an understanding of the administrative and financial aspects of healthcare operations. Emphasis is also placed on students applying curricular theory to best practices in the classroom, disease care, and patient education settings.