

RESP 207 - *Cardiopulmonary Pharmacology*

An introductory course that focuses on the pharmacologic modes of action, indications, routes of administration and excretion, side effects, hazards and drug interactions for agents used in the management of patients with cardiopulmonary disease.

Credit Hours: 3. PREQUISITES: None

RESP 208 - *Respiratory Therapy Fundamentals*

This is a lecture course that presents the basic principles of Respiratory Therapy. Topics include principles of patient assessment, infection control, respiratory pharmacology, as well as theory and application of equipment used to diagnose and treat cardiopulmonary disease. This course prepares students to recognize indication for therapy, initiate appropriate treatment strategies, evaluate specific clinical outcomes.

Credit Hours: 3. LECTURE: Lecture = 3 hours (56 contact hours). Prerequisites: MATH 112, BIOL 210, PHYS 121

RESP 215 - *Clinical Applications and Procedures I*

Introductory course designed to provide pre-clinical laboratory instruction and preceptor-supervised clinical experiences in respiratory care procedures. Emphasis is placed on routine patient care, including such modalities as patient assessment; medical gas therapy; application of aerosol and humidity devices; artificial airway care; and bronchial hygiene therapies.

Credit Hours: 7. Contact Hours: 236 . Prerequisites: RESP 208.

RESP 212 - *Cardiopulmonary Physiology*

This lecture series addresses the physiology of the cardiovascular and pulmonary systems. The course is designed to demonstrate the application of cardiopulmonary physiological principles in practice of medicine. Discussions focus on the regulation and maintenance of cardiopulmonary function under normal conditions. The course also provides an introduction to the integrative control of the cardiopulmonary function. Topics Address: Mechanics of breathing; Alveolar ventilation; Pulmonary blood flow; Ventilation / perfusion; Diffusion and transport of gases; Acid-Base balance; Control of breathing; Clinical correlation to pulmonary function testing; Congestive heart failure; Electrophysiology of the heart; Cardiac cycle; Hemodynamics; Clinical correlation to cardiopulmonary profiles; Peripheral circulation and vascular control; Special circulations; Integrative control of the cardiovascular system; Clinical correlation to the cardiopulmonary response to stress.

Credit Hours: 3. LECTURE/LAB: Lecture = 3 hours (45 contact hours). Prerequisites: MATH 112, BIOL 210, PHYS 121

RESP 213 - *Professional Directions*

This course is designed to introduce students to current topics facing allied health practitioners involved in the practice of respiratory therapy. The course will include modules on professionalism, problem-based learning, critical thinking, as well as, ethical and legal issues related to the practice of respiratory therapy.

Topics Addressed: Professionalism; Accreditation, national registries, and state licensure; Introduction to problem based learning and critical thinking; Overview of ethics and legal aspects of health care; Information technology and its application in health care.

Credit Hours: 1. LECTURE/LAB: Lecture = 1 hours (15 contact hours)

RESP 220 - *Critical Care Concepts I*

This lecture series introduces students to the clinical application of respiratory care in critically ill patients. It incorporates the theories and protocols learned in Respiratory Therapy Fundamentals and develops critical care skills, which emphasize ventilatory support modalities, hemodynamic monitoring, metabolic monitoring and patient management techniques.

Topics Addressed: Artificial blood gas procurement and analysis; X-ray interpretation; Hemodynamics; Ventilation and Oxygenation strategies; Ventilator terminology; Ventilator modalities; Introduction to critical care.

Credit Hours: 2. LECTURE/LAB: Lecture = 2 hours (30 contact hours). Prerequisites: RESP 208, RESP 212

RESP 221 - *Clinical Applications and Procedures II*

This course is designed to introduce students to essential concepts related to critical care medicine. Emphasis is placed on monitoring techniques, patient weaning and ventilatory support systems.

Credit Hours: 5. CLINIC: Clinic = 5 hours (225 contact hours). Prerequisites: RESP 201

RESP 222 - *Cardiopulmonary Pathophysiology*

This course provides a review of the most common diseases that affect the cardiovascular and pulmonary systems. It includes discussions on clinical diagnostic techniques and treatment approaches commonly used in the management of patients with cardiopulmonary disease. The course also utilizes case studies in a problem-based learning format to teach students critical thinking skills that are required to successfully treat patients with diseases of the heart and lungs.

Topics Addressed: Medical history and physical examination; Pulmonary function testing; Cardiopulmonary profiles; Clinical Laboratory Assessment; Chest Roentgenology; Case Management of patient with respiratory disease; Chronic Bronchitis and Emphysema; Asthma; Sleep Apnea; Cystic Fibrosis; Pneumonia; Acquired Immunodeficiency Syndrome; Tuberculosis; Pulmonary Embolism and Infarction; Case Studies - Infectious Diseases; Diseases of the Pleura and Chest Wall; Neurological Disorders; Pneumoconiosis and COPD; Smoke and Thermal Injuries; ARDS.

Credit Hours: 2. LECTURE/LAB: Lecture = 2 hours (45 contact hours). Prerequisites: RESP 208, RESP 212

RESP 230 - *Critical Care Concepts II*

A continuation of Critical Care Concepts I with furthered emphasis on adult critical care ventilatory support modalities. Coursework covers intermediate and advanced pulmonary care strategies. It encompasses patient management through a problem-based learning format. It also incorporates new advances in critical care procedures and a broadened approach to patient care beyond primary pulmonary diseases.

Topics Addressed: Patient assessment; Pulmonary inspection; Breathing patterns; Endotracheal Intubation; Bedside diagnostics; Breathing techniques; Mechanical Ventilation; Critical care protocols and procedures.

Credit Hours: 2. LECTURE/LAB: Lecture = 2 hours (45 contact hours). Prerequisites: RESP 220

RESP 251 - *Clinical Applications and Procedures III*

This course engages the respiratory therapy student in laboratory and clinical instruction in advanced respiratory care procedures. Emphasis is placed on cardiopulmonary strategies for adult and neonatal patients. Students will participate in the care of patients in critical care areas undergoing mechanical ventilation and in cardiopulmonary rehabilitation.

Credit Hours: 7. Contact Hours: 280.
Prerequisites: RESP 221

RESP 232 - *Neonatology and Pediatrics*

Lecture series encompassing the therapeutic approach to treatment of neonates and pediatric patients. Addresses the unique characteristics of both the cardiovascular and pulmonary systems for patients from birth to age twelve. Discusses the parameters of disease states specific to this age group, including diagnostic and management differences. Teaches the physiological changes during gestation in relation to pulmonary management at premature birth and into recovery, as well as acute resuscitation protocols. Mechanical ventilation modalities traditional to adult care are applied to this age group, and new modalities are discussed. Topics Addressed: Patient assessment; Pediatric neuromuscular disease; Asthma / Bronchiolitis; Epiglottitis / Croup / Foreign object aspiration; Cystic Fibrosis; Sleep Apnea / Pneumonia / Drowning; Pulmonary development; Cardiovascular development; Transition of newborns; Prenatal history and patient assessment of the neonate; Asphyxia; Resuscitation; Cardiovascular Defects: Acyanotic and Cyanotic; Respiratory Defects; Respiratory Distress Syndrome; Transient tachypnea of the newborn; B Streptococcal infections; Meconium aspiration syndrome; Patent Ductus Arteriosus; Apnea of prematurity; Convent

Credit Hours: 2. LECTURE/LAB: Lecture = 2 hours (30 contact hours). Prerequisites: RESP 208, RESP 212, RESP 220

RESP 233 - *Cardiopulmonary Rehabilitation and Long Term Care*

This course is designed to introduce students to the care of chronically ill patients. Discussions will focus on the delivery of respiratory care services for hospital-based cardiopulmonary rehabilitation programs, extended care facilities, and home care. Topics include clinical exercise testing, exercise prescriptions, and clinical practice guidelines for management of patients who require long term respiratory care (e.g., oxygen therapy, bronchodilatory therapy, mechanical ventilation, etc.). Topics Addressed: Clinical exercise testing; Exercise prescriptions; Case Management of patient with chronic respiratory disease; Respiratory care procedures used in alternate care settings.
Credit Hours: 3. LECTURE/LAB: Lecture = 3 hours (45 contact hours)

RESP 234 - Pulmonary Diagnostic Testing

This course covers basic instrumentation and diagnostic techniques employed in the assessment of pulmonary functions. It includes interpretive analysis of test results as related to disease states and other abnormal lung conditions and provides information regarding the appropriate strategy for proper patient testing. Students are expected to apply their understanding of pulmonary physiology to the selection of appropriate testing techniques and equipment. Topics Addressed: Lung Volumes and Capacities; Diagnostic Equipment; Ventilation and Ventilatory Control Tests; Lung Volume test; Spirometry and Pulmonary Mechanics; Gas Distribution and Diffusion Tests; Critical Care Monitoring; Quality Assurance; Collection and evaluation of Clinical History and Case Studies; Sleep Studies; Bronchoscopy; Metabolic Measurements; PFT in Children and Adolescents; Computer Systems.

RESP 235 - Cardiopulmonary Resuscitation and Advanced Cardiac Life Support

This course is designed to review the most current American Heart Association (AHA) standards for basic life support and advanced cardiac life support. Special emphasis is devoted to the recording and interpretation of electrocardiograms, pharmacologic interventions used in the treatment of cardiac emergencies, and airway management techniques used during cardiopulmonary resuscitation. Students must successfully complete an AHA approved Advanced Cardiac Life Support course.
Credit Hours: 1. LECTURE/LAB: Lecture = 1 hour (15 contact hours)

RESP 235 - Cardiopulmonary Resuscitation and Advanced Cardiac Life Support

This course is designed to review the most current American Heart Association (AHA) standards for basic life support and advanced cardiac life support. Special emphasis is devoted to the recording and interpretation of electrocardiograms, pharmacologic interventions used in the treatment of cardiac emergencies, and airway management techniques used during cardiopulmonary resuscitation. Students must successfully complete an AHA approved Advanced Cardiac Life Support course.
Credit Hours: 1. LECTURE/LAB: Lecture = 1 hour (15 contact hours)