

Respiratory Therapy (RTH)

Courses

RTH-199. Respiratory Therapeutics. 5 Credits.

RECI 15 hrs LECT 60 hrs LAB 45 hrs

An introduction to respiratory care, including history of the profession, ethical and legal responsibilities of the respiratory therapist; medical terminology, basic respiratory care procedures including the physics, physiology and administration of medical gas therapy, basic patient communication and assessment skills. Basic respiratory care procedures, humidity and aerosol therapy, hyperinflation therapy, chest physiotherapy and bronchial hygiene; an overview of microbiology as applied to respiratory care; infection control; and equipment sterilization procedures. Course requires that students have completed the pre-professional phase of the Respiratory Therapy program and have permission of the program director to enroll.

Prerequisites: Permission of Program Director

Corequisites: RTH-202, RTH-203, RTH-210

Additional Fees: Course fee applies.

RTH-202. Cardiopulmonary Pharmacology. 2 Credits.

LECT 30 hrs

This course is an overview of general pharmacology, including routes of administration, federal regulations, dosages and calculations, and safety precautions. It provides an in-depth study of drugs administered to the respiratory patient, including chemical structure, mechanism of action, indications, contraindications, physiologic effects and side-effects.

Prerequisites: BIO-101, BIO-102, CHM-117 and CHM-118 and permission of program director

Corequisites: RTH-199, RTH-203, RTH-210.

RTH-203. Cardiopulmonary Physiology. 2 Credits.

LECT 30 hrs

A study of physiologic mechanisms of the cardiopulmonary system, including a review of the anatomy of the pulmonary and circulatory systems; ventilatory mechanics, gas diffusion, physiology of internal and external respiration, oxygen transport, carbon dioxide elimination, acid-base balance, ventilation perfusion relationships; and the neurologic control of ventilation.

Prerequisites: BIO-101, BIO-102 and permission of program director

Corequisites: RTH-199, RTH-202, RTH-210.

RTH-204. Cardiopulmonary Evaluation. 3 Credits.

LECT 30 hrs LAB 30 hrs

This course will cover the techniques of patient assessment and diagnostic evaluation of the cardiopulmonary system. Topics covered include: arterial blood gas analysis, pulmonary function testing, non-invasive monitoring of oxygenation and ventilation, an overview of laboratory tests, chest radiographs, electrocardiograph interpretation and hemodynamic monitoring.

Prerequisites: RTH-199, RTH-202, RTH-203, RTH-210 and permission of Program Director

Corequisites: RTH-205, RTH-206 and RTH-211

Additional Fees: Course fee applies.

RTH-205. Cardiopulmonary Pathophysiology. 2 Credits.

LECT 30 hrs

An overview of the pathophysiology of diseases of the cardiopulmonary system with an emphasis on pathophysiologic processes such as hypoxemia, hypoventilation, diffusion defects and ventilation perfusion mismatch; a survey of diseases encountered by the respiratory therapist, including pathophysiology, diagnostic methods and findings, clinical manifestations, treatment and prognosis.

Prerequisites: RTH-203 and permission of program director.

RTH-206. Mechanical Ventilation. 4 Credits.

LECT 45 hrs LAB 45 hrs

Techniques of airway management and the provision of mechanical ventilation; includes types of airways and appropriate uses; the physics and physiology of mechanical ventilation; classification of mechanical ventilators; indications for clinical application and complications of mechanical ventilation; management and monitoring of the patient requiring ventilatory support; and appropriate methods of withdrawing ventilatory support.

Prerequisites: RTH-199, RTH-202, RTH-203, RTH-210 and permission of program director

Corequisites: RTH-204, RTH-205 and RTH-211

Additional Fees: Course fee applies.

RTH-207. Neonatal and Pediatric Respiratory Care. 2 Credits.

LECT 30 hrs

An overview of fetal development of the cardiopulmonary system with an emphasis on circulatory transitions and respiratory complications occurring at birth and in the neonatal period; a review of neonatal and pediatric respiratory disorders with an emphasis on clinical findings and treatment; a survey of respiratory care procedures as applied to the neonatal and pediatric patient, including oxygen therapy, humidity and aerosol therapy, diagnostic testing and mechanical ventilation.

Prerequisites: RTH-204, RTH-205, RTH-206, RTH-211 and permission of program director

Corequisites: RTH-208 and RTH-212.

RTH-208. Advanced Respiratory Care. 2 Credits.

LECT 30 hrs

A survey of current events and state-of-the-art modalities in respiratory care; includes respiratory care in non-traditional settings, cardiopulmonary rehabilitation, controversies in clinical practice, and changes in health care affecting the respiratory care profession. Students are required to complete advanced cardiac life support (ACLS) certification through the American Heart Association.

Prerequisites: RTH-204, RTH-205, RTH-206, RTH-211 and permission of program director

Corequisites: RTH-207 and RTH-212.

RTH-210. Clinical Practice I. 3 Credits.

CLIN 240 hrs

A supervised clinical application of the respiratory care procedures covered in Respiratory Therapeutics including chart review, patient and health professional communication, basic patient assessment, assembly and monitoring of oxygen therapy, aerosol and humidity therapy, aerosolized drug administration, hyperinflation therapy, bronchial hygiene and evaluation of patient response.

Prerequisites: Permission of Program Director

Corequisites: RTH-199, RTH-202 and RTH-203

Additional Fees: Course fee applies.

RTH-211. Clinical Practice II. 3 Credits.

CLIN 240 hrs

Continued refinement of the skills covered in Clinical Practice I, in a general care environment, with an emphasis on clinical competence in providing basic respiratory care; followed by an introduction to the critical care environment and to respiratory care of the critically ill patient, with an emphasis on patient assessment and monitoring skills, and patient safety. Supervised application of the skills covered in Mechanical Ventilation and Cardiopulmonary Evaluation, including specialty rotations in ECG, the operating room, pulmonary function testing and blood gas laboratory, and physician offices.

Prerequisites: RTH-199, RTH-202, RTH-203, RTH-210 and permission of program director

Corequisites: RTH-204, RTH-205 and RTH-206

Additional Fees: Course fee applies.

RTH-212. Clinical Practice III. 4 Credits.

CLIN 240 hrs

Continued refinement of the skills needed to function in a critical care environment with an emphasis on clinical competence in hemodynamic and advanced monitoring and management of the patient on mechanical ventilation. An emphasis is placed on interaction with other members of the healthcare team, patient care planning, clinical decision making and independent practice. Includes specialty rotations in neonatal and pediatric respiratory care, post open heart recovery and home care. The clinical fee includes the cost of the required National Board of Respiratory Care Self-Assessment Examination (NBRC SAE).

Prerequisites: RTH-204, RTH-205, RTH-206, RTH-210, RTH-211 and permission of program director

Corequisites: RTH-207 and RTH-208

Additional Fees: Course fee applies.