

Respiratory Care Program Course Descriptions

Respiratory Core Course Descriptions

RSP 101 Fundamentals of Respiratory Care

This course provides an orientation to general patient assessment which includes infection control, patient safety, patient interviewing, ethics, communication, record keeping, electronic record management and clinical laboratory studies. In addition, students will be introduced to basic therapeutic concepts and modalities used in respiratory therapy. These concepts are principles of infection control, gas laws and physics, gas exchange, oxygen transport, regulation of breathing, and patient assessment with a focus on basic therapeutics including medical gas delivery, humidity & aerosol therapy, and basic respiratory pharmacology. The course also includes a discussion of signs of sudden cardiac arrest, heart attack, stroke, and foreign body obstruction.

Co-requisites: ENG 101, MAT 113, BIO 105, RSP 102

45 lecture hours 90 clinical lab hours 6 credit hours

RSP 102 - Cardiopulmonary Pharmacology

This course provides an overview of drugs affecting the cardiopulmonary system, including bronchodilators, corticosteroids, anti-infectives (and antibiotics), skeletal muscle relaxants, central nervous system depressants, respiratory stimulants, diuretics and cardiovascular agents.

Co-requisites: ENG 101, MAT 113, BIO 105, RSP 101

30 lecture hours 2 credit hours

RSP 110 Fundamentals of Respiratory Critical Care

This course builds on the foundation of RSP 101, Fundamentals of Respiratory Care. The course provides knowledge and skills in advanced airway management, arterial blood gas interpretation, sampling techniques, equipment use in analysis, and non-invasive ventilation. The course also introduces concepts and techniques in invasive ventilation, methods of bronchoscopy and the role of the respiratory therapist in assisting the physician during invasive diagnostic procedures.

Prerequisites: ENG 101, MAT 113, BIO 105, RSP 101, RSP 102

Co-requisites: ENG 102, BIO 106, RSP 111 RSP 112

45 lecture hours 135 clinical lab hours 6 credit hours

RSP 111 Cardiopulmonary Anatomy and Physiology

The course is a study of the anatomy and physiology of the cardiopulmonary system as it relates to respiratory care and includes basic anatomy of the pulmonary and cardiac system, physiology of circulation, gas exchange, control of respiration and an overview of the pathophysiology and treatment of common disorders of the cardiopulmonary system. In addition, the course will survey the renal system and its effects on the respiratory and cardiovascular systems.

Prerequisites: ENG 101, MAT 113, BIO 105, RSP 101, RSP 102

Co-requisites: ENG 102, BIO 106, RSP 110, RSP 112

30 lecture hours 2 credit hours

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RSP 112 Cardiopulmonary Pathophysiology

This course is an introduction to the assessment and pathophysiology of patients with cardiopulmonary disease. Emphasis is on assessment of oxygenation, ventilation and acid base balance. Additional course content includes an introduction to pulmonary pathophysiology emphasizing differences in obstructive and restrictive lung disease.

Prerequisites: ENG 101, MAT 113, BIO 105, RSP 101, RSP 102

Co-requisites: ENG 102, BIO 106, RSP 110, RSP111

45 lecture hours 3 credit hours

RSP 201 Cardiopulmonary Evaluation

This course covers invasive and non-invasive diagnostic and monitoring procedures used in Respiratory Care and Intensive Care Medicine. Additional course content includes indications, techniques, complications and result interpretation of the following diagnostic procedures: chest radiology, electrocardiography, pulmonary function testing, hemodynamic monitoring, arterial blood gas analysis, physical assessment, laboratory testing and mechanical ventilation.

Prerequisites: ENG 102, BIO 106, CHE 105, RSP 110, RSP 111, RSP 112

Co--requisites: BIO 108, RSP 202

45 lecture hours 3 credit hours

RSP 202 Adult Critical Care

This course covers the physiologic principles and clinical procedures used in both invasive and noninvasive artificial ventilatory support to adults. Topics discussed in this course include: airway management, respiratory failure, physics and physiology of ventilatory support, initiating and adjusting ventilatory support, managing and monitoring the patient in respiratory failure, and discontinuing ventilatory support.

Prerequisites: ENG 102, BIO 106, CHE 105, RSP 110, RSP 111, RSP 112

Co-requisites: BIO 108, RSP 201

45 lecture hours 180 clinical lab hours 7 credit hours

RSP 210 Neonatal Pediatric Respiratory Care

This course provides a comprehensive review of pediatric and neonatal respiratory care. Special considerations of respiratory care practice unique to pediatrics and neonatology are discussed, including pediatric anatomy and physiology, fetal development, clinical assessment, oxygen therapy, airway management, mechanical ventilation, resuscitation, cardiopulmonary pathophysiology and disorders specific to this patient population. Content also includes a discussion of ethical and cultural considerations in the care of the child and family.

Prerequisites: BIO 108, RSP 201, RSP 202

Co-requisites: PSY 101 or PSY 102, RSP 211, RSP 212, RSP 213

45 lecture hours 3 credit hours

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RSP 211 Long Term, Home, and Rehabilitative Care

This course consists of an analysis of the goals and methods underlying the delivery of respiratory care in non- acute settings. It includes standards and regulations governing non- acute respiratory care; team planning; patient selection; delivery of care and documentation of various clinical services in the home as well as in long- term care and rehabilitation facilities. Also, included in this course are factors in the costs and reimbursement of services and ethical issues arising in the non- acute setting. This course also discusses current issues and trends in respiratory care practice and out- patient education for asthma and Chronic Obstructive Pulmonary Disease.

Prerequisites: BIO 108, RSP 201, RSP 202

Co-requisites: PSY 101 or PSY 102, RSP 210, RSP 212, RSP 213

30 lecture hours 2 credit hours

RSP 212 Clinical Practice

This clinical practice rotation is designed to provide supervised experience in both acute care and alternative settings, with an emphasis on developing the skills necessary to function independently. Experiences include cardiopulmonary diagnostics, critical care of the adult, infant and child, and long-term, home and rehabilitative care.

Prerequisites: BIO 108, RSP 201, RSP 202

Co-requisites: PSY 101 or PSY 102, RSP 210, RSP 211, RSP 213

180 clinical hours 4 credit hours

RSP 213 Special Topics Respiratory Care (3.0 Credit Hours)

This course is an in-depth study of the clinical management of the cardiopulmonary patient in the critical care setting, emphasizing specialized respiratory assessment; advanced ventilatory management techniques; basic interpretation of the chest film; hemodynamic monitoring; electrocardiograph interpretation; and the effects of cardiopulmonary disorders on the other major body systems. The care of patient and families will be studied with a special emphasis on culture, society, family dynamics in the intensive care environment. Ethics and ethical dilemmas will be explored in relationship to delivery of health care and critical care.

Prerequisites: BIO 108, RSP 201, RSP 202

Co-requisites: PSY 101 or PSY 102, RSP 210, RSP 211, RSP 212

45 lecture hours 3 credit hours.