

# Respiratory Therapy - CPS (RPT)

## Courses

### **RPT 6962. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

### **RPT 6970. Seminar. (1-4 Hours)**

Offers an in-depth study of selected topics.

**Prerequisite(s):** RPT 7205 with a minimum grade of C- ; RPT 7210 with a minimum grade of C-

### **RPT 7200. Advanced Cardiopulmonary Physiology. (4 Hours)**

Covers advanced in-depth integrated physiology of the cardiovascular, renal, and pulmonary systems. Discusses the physiological dynamics, control mechanisms, and system interrelationships of the cardiovascular, pulmonary, and renal systems. Offers students an opportunity to make applications of advanced cardiopulmonary and renal physiology concepts to the management of neonatal, pediatric, adult, and geriatric patients requiring cardiovascular, pulmonary, and renal diagnosis and treatment.

### **RPT 7205. The Evolving Roles of Respiratory Care Professionals. (4 Hours)**

Presents current and projected trends in respiratory therapy. Focuses on elaborating traditional and emerging roles for respiratory therapists, thereby highlighting numerous career opportunities in education, management, research, and other areas. Provides in-depth study related to a quality improvement project in a respiratory care department or educational program. Offers students an opportunity to develop three, five, and 10-year career and professional service plans.

### **RPT 7210. Research Design. (4 Hours)**

Covers different types of designs used in medical research. Emphasizes the evaluation of research designs in peer-reviewed medical journals. Discusses the quality of published research articles and evaluation of levels of evidence produced by clinical research. Attention is given to review of medical literature to identify evidence for current or new standards of practice. Discusses development of research protocols, proposals for research funding, and the management of research projects.

### **RPT 7215. Applied Research in Respiratory Care. (4 Hours)**

Offers a review and discussion of student research protocols and data analysis. Discusses how to prepare research abstracts, posters, and manuscripts under the guidance of departmental faculty. Integrates research outcomes to support clinical practice.

**Prerequisite(s):** RPT 7210 with a minimum grade of C-

### **RPT 7300. Development of Clinical Practice Guidelines and Respiratory Care Protocols. (4 Hours)**

Offers students an opportunity to gain the foundations necessary to build a strong understanding of how to complete systematic state-of-the-art reviews to summarize evidence based on a thorough literature search, critically appraise individual studies, and use statistical techniques to combine valid studies. Topics include meta-analysis, evidence-based clinical practice guidelines, and the GRADE (Grading of Recommendations, Assessment, Development, and Evaluation) approach to evaluate the supporting evidence and the strength of recommendations in healthcare. Also covers the criteria for establishing the scientific basis for protocol-directed respiratory care, evaluation of respiratory protocols efficacy in providing ICU care, and the use of respiratory protocols in providing non-ICU care.

### **RPT 7305. Development of Patient Management Plans. (4 Hours)**

Offers students an opportunity to use previously acquired knowledge and assessment skills to prepare respiratory care plans for those experiencing respiratory and respiratory-related disorders commonly encountered by the respiratory therapist. Includes how to evaluate outpatient and emergency department patients for home treatment; care plan development, including for patients with rehospitalization; rapid response team activation; or admission to ICU. Topics include concepts of respiratory and respiratory-related illnesses. Offers students an opportunity to learn how to make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment (evidence-based practice), which may lower the cost of healthcare delivery. Examines skills needed for future advanced practice respiratory therapist (APRT) roles.

**RPT 7400. Pulmonary Diseases and Disorders. (4 Hours)**

Offers students an opportunity to gain the foundations necessary to build a strong understanding of the pathophysiology of pulmonary diseases and disorders. Topics include obstructive airway diseases, infectious pulmonary diseases, pulmonary vascular diseases, chest and pleura trauma, disorders of the pleura and chest wall, environmental lung diseases, neoplastic disease, and chronic noninfectious parenchyma disease.

**RPT 7401. Cardiopulmonary Assessment and Diagnostics. (4 Hours)**

Describes patient evaluation and implementation of evidence-based respiratory care plans. Reviews and applies evidence-based practice and critical diagnostic thinking to the review of the medical record, patient interview, physical assessment, and evaluation of diagnostic studies. Reviews assessment of oxygenation, ventilation, and arterial blood gases. Discusses laboratory studies, imaging studies, and ECG monitoring and interpretation. Describes pulmonary function testing, diagnostic bronchoscopy, and other diagnostic studies. Also reviews acute- and critical-care monitoring, sleep studies, and maternal and perinatal/neonatal patient assessment.

**RPT 7402. Adult Critical Care. (4 Hours)**

Offers students an opportunity to gain the foundations necessary to build a strong understanding of how to manage airways, administer specialty gases, manage mechanical ventilation, and deliver pharmacologic agents. Topics include assessment of patient status and changes in status and anticipating care based on laboratory results and reports on imaging. Offers students an opportunity to build a strong understanding of the effects of pharmacologic agents, how to anticipate care needed based on nutritional status, how to prevent ventilator-associated pneumonia, recognize and manage patients with infections and sepsis, manage end-of-life care, and prepare for disasters.

**RPT 7403. Neonatal and Pediatric Care. (4 Hours)**

Covers evaluation of maternal history; neonatal assessment; patient history; physical examination; and results of laboratory studies, imaging, and other diagnostic tests. Topics include assessment and management of airways, administration and monitoring of specialty gases, management of ventilation and oxygenation, prevention of ventilator-associated pneumonia, and delivery of pharmacologic agents. Offers students an opportunity to build a strong understanding of how to assess patient status and to anticipate care based on laboratory results, nutritional status, and imaging reports. Other topics include anticipating the effects of pharmacologic agents, management of end-of-life care, preparing for disasters, and evaluating patient and family understanding of education on medications, equipment, and procedures.

**RPT 7962. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions.