

## Respiratory Therapy (RESP)

### RESP 1540

#### Survey of Respiratory Therapy

1

Introduces students to the profession of respiratory therapy. Includes field trips and limited lab activities. Open to all students.

### RESP 2145

#### Fundamentals of Respiratory Care Lab

3

\* Prerequisite(s): Acceptance into the Respiratory Therapy Program

\* Corequisite(s): RESP 2300 and RESP 2520

Provides laboratory experiences to develop basic patient interaction and assessment skills required of an entry-level respiratory therapist. Emphasizes students' ability to carry out commonly ordered respiratory therapy procedures. Includes participation in respiratory care simulations. Course lab fee of \$225 applies.

### RESP 2165

#### Mechanical Ventilation Lab

2

\* Prerequisite(s): RESP 2145

\* Corequisite(s): RESP 2320

Provides laboratory experience with mechanical ventilation techniques and equipment. Emphasizes patient observation and assessment skills, as well as techniques in initiating, troubleshooting, monitoring, managing, and weaning ventilator parameters. Course lab fee of \$217 applies.

### RESP 2210

#### Cardiopulmonary and Renal Anatomy and Physiology I

3

\* Prerequisite(s): Acceptance into the Respiratory Therapy Program

Introduces anatomy and physiology of the pulmonary, cardiovascular, and renal systems. Includes principles of fluid dynamics governing oxygen and carbon dioxide transport throughout the body.

### RESP 2230

#### Cardiopulmonary Pathophysiology I

2

\* Prerequisite(s): Acceptance into the Respiratory Therapy Program

\* Corequisite(s): RESP 2210

Covers the underlying pathophysiology of medical and surgical cardiopulmonary diseases. Emphasizes abnormal physiological processes which result in the signs and symptoms of each cardiopulmonary disorder. Includes diagnosis, selection, and implementation of therapeutic modalities and the role of the respiratory therapist in treatment.

### RESP 2250

#### Basic Patient Assessment

2

\* Prerequisite(s): Acceptance into Respiratory Therapy Program.

Introduces basic patient assessment techniques, including respiratory therapy application of obtaining patient history and physical examination. Emphasizes integration of laboratory and imaging studies.

### RESP 2270

#### Application of Cardiopulmonary Diagnostics

3

\* Prerequisite(s): RESP 2210

Introduces theory and clinical application of basic cardiopulmonary diagnostic studies, including simple spirometry, arterial and mixed venous blood gases, and electrocardiograms. Emphasizes critical thinking skills in interpretation of diagnostic findings.

### RESP 2300

#### Fundamentals of Respiratory Care

3

\* Prerequisite(s): Acceptance into the Respiratory Therapy Program.

\* Corequisite(s): RESP 2145 and RESP 2520

Examines principles and theory of clinical application of basic respiratory treatments and therapies, including indications, contraindications, hazards and complications, and equipment management. Includes principles and theory of clinical application of airway management and invasive and non-invasive ventilation. Emphasizes patient assessment and critical thinking skills.

### RESP 2320

#### Mechanical Ventilation I

3

\* Prerequisite(s): RESP 2300

\* Corequisite(s): RESP 2165

Introduces basic principles of mechanical ventilation, including determining the need for ventilation support, as well as initiation, maintaining, monitoring, and weaning from mechanical ventilation.

### RESP 2330

#### Entry Level Respiratory Therapy Review

1

\* Prerequisite(s): RESP 2320

Provides a comprehensive review to integrate concepts and skills in Respiratory Therapy.

### RESP 2420

#### Critical Thinking in Respiratory Care

2

\* Prerequisite(s): RESP 2300

Provides learning experiences for students to develop a deep and broad understanding of respiratory care content based on sound clinical decision making. Requires students to solve practical problems in respiratory care.

### RESP 2520

#### Principles of Pharmacology

2

\* Corequisite(s): RESP 2300 and RESP 2145

Introduces pharmacology, including general principles, autonomic and central nervous system agents, cardiovascular agents, and immunotherapeutic agents. Includes the study of drugs used in managing renal, GI tract, endocrine, and infectious or neoplastic diseases and disorders.

### RESP 2705

#### Clinical Practice I

3

\* Prerequisite(s): RESP 2145

Provides clinical rotations in the hospital environment allowing for mentored practice of skills. Emphasizes application of assessment skills including medical chart reviews and patient observation and examination. Includes recommendation, performance, and modification of basic therapies.

### RESP 2715

#### Specialty Clinical Experiences

1

\* Prerequisite(s): RESP 2145

Provides opportunity to observe and participate in specialty areas of the respiratory care profession.

### RESP 2725

#### Clinical Practice II

3

\* Prerequisite(s): RESP 2705

Provides clinical rotations in selected medical settings, focusing on skills of initiation, management, and weaning of mechanical ventilation. Includes case studies as well as patient care.

### RESP 3210

#### Cardiopulmonary and Renal Anatomy and Physiology II

2

\* Prerequisite(s): RESP 2210 and University Advanced Standing

Addresses cardiopulmonary anatomy and physiology specifically for the advanced-level respiratory care practitioner focusing on the advanced physiologic considerations of the cardiovascular, pulmonary, and renal systems.

### RESP 3220

#### Cardiopulmonary Pathophysiology II

2

\* Prerequisite(s): RESP 2230 and University Advanced Standing

Examines pathophysiology and diagnosis of coronary artery disease, fungal lung diseases, neoplasms, HIV, adult respiratory distress syndrome (ARDS), chest trauma, shock, multiple organ dysfunction syndrome (MODS), and differentiation of extracellular and intracellular fluid compartments.

# Course Descriptions

## **RESP 3230**

### **Advanced Cardiopulmonary Technology**

**2**

\* Prerequisite(s): RESP 2270 and University Advanced Standing

Explores advanced diagnostic procedures and develops interpretive skill in cardiopulmonary function, lung dynamics, specialty gases, blood gas analysis, and metabolic assessment.

## **RESP 3260**

### **Neonatal/Pediatric Critical Care**

**3**

\* Prerequisite(s): RESP 2320 and University Advanced Standing

\* Corequisite(s): RESP 3265

Examines pediatric and neonatal respiratory care with an emphasis on intensive care activities, therapeutic procedures, life support modalities, and fetal, neonatal, and pediatric pathophysiology. Course lab fee of \$69 applies.

## **RESP 3265**

### **Neonatal/Pediatric Critical Care Lab**

**1**

\* Prerequisite(s): RESP 2165 and University Advanced Standing

\* Corequisite(s): RESP 3260

Provides laboratory experiences to develop advanced patient interaction and assessment skills in the areas of neonatal and pediatric critical care. Emphasizes students' ability to carry out commonly ordered respiratory therapy procedures. Includes participation in respiratory care simulations.

## **RESP 3270**

### **Adult Critical Care**

**2**

\* Prerequisite(s): RESP 2725 and University Advanced Standing

Explores advanced level adult respiratory care in the intensive care setting. Emphasizes ventilation/perfusion monitoring, hemodynamic monitoring airway, assessment and critical patient management.

## **RESP 3280**

### **Extended Care Roles for Respiratory Therapists**

**2**

\* Prerequisite(s): RESP 2270 and University Advanced Standing

Analyzes theory and principles of extended care roles for the respiratory therapist. Examines the respiratory therapist's role in quality management, pulmonary rehabilitation, sleep medicine, homecare, and hyperbaric medicine. Includes legal, ethical, and moral considerations of chronic and extended care.

## **RESP 3320**

### **Mechanical Ventilation II**

**3**

\* Prerequisite(s): RESP 2320 and Advanced University Standing

\* Corequisite(s): RESP 3325

Focuses on the study of advanced mechanical ventilation. Emphasizes advanced modes of ventilation, patient management, and assessment. Includes invasive and non-invasive ventilation techniques.

## **RESP 3325**

### **Mechanical Ventilation II Lab**

**1**

\* Prerequisite(s): RESP 2165 and University Advanced Standing

\* Corequisite(s): RESP 3320

Provides laboratory experience with mechanical ventilation techniques and equipment. Emphasizes advanced modes of ventilation, patient management, and assessment.

## **RESP 3430**

### **Principles of Healthcare Education and Disease Management WE**

**3**

\* Prerequisite(s): RESP 2330 and University Advanced Standing

Introduces concepts and principles of respiratory chronic disease management. Examines health models, processes, staffing, training, patient advocacy/engagement, and reporting/reimbursement necessary to improve patient outcomes and reducing healthcare costs. Provides background in educational theory and practical application skills of educational delivery and evaluation within the construct of the health care environment.

## **RESP 3510**

### **Anatomy and Physiology of Sleep**

**3**

\* Prerequisite(s): University Advanced Standing and Department approval. Requires (acceptance into the Respiratory Care Program or completion of a respiratory care program) or R.N. credential.

Introduces anatomy and physiology of the neurological, cardiac, and respiratory systems during the wake and sleep cycles. Emphasizes changes related to sleep disorders.

## **RESP 3520**

### **Introduction to Sleep Disorders**

**3**

\* Prerequisite(s): RESP 3510 and University Advanced Standing

Provides an overview of the history of sleep medicine, normal sleep physiology, the effects of sleep-wake disruption, sleep disorders, and abnormal sleep physiology. Includes an introduction to polysomnography and the fundamentals of therapeutic interventions utilized to treat sleep disorders.

## **RESP 3765**

### **Clinical Practice III Neonatal/Pediatric Respiratory Care**

**3**

\* Prerequisite(s): RESP 3260 and University Advanced Standing

Provides mentored participation in the clinical care of patients in the neonatal/pediatric critical care setting. Emphasizes cardiovascular and patient/ventilator monitoring and assessment and airway management.

## **RESP 3785**

### **Extended Roles in Respiratory Therapy Clinical**

**2**

\* Prerequisite(s): University Advanced Standing

\* Prerequisite(s) or Corequisite(s): RESP 3280

Provides clinical experiences related to RESP 3280, such as rehabilitation, extended care, home care, polysomnography, patient assessment for discharge planning and quality management.

## **RESP 4610**

### **Advanced Patient Assessment WE**

**3**

\* Prerequisite(s): RESP 3270 and University Advanced Standing

Emphasizes the diagnostic processes involved in assessing, evaluating, and treating patients with cardiopulmonary disease, with an intensive, mentored clinical experience.

## **RESP 4630**

### **Continuous Quality Improvement**

**2**

\* Prerequisite(s): University Advanced Standing

Enhances understanding of how to construct and conduct quality improvement projects in the clinical workplace.

## **RESP 4640**

### **Respiratory Therapy Capstone**

**2**

\* Prerequisite(s): RESP 3270 and Advanced University Standing

Focuses on areas of advanced respiratory care, leadership and management, case management, research, education, or other special area of interest. Student will identify and complete a project applying knowledge and skills learned in the program.

## **RESP 4775**

### **Clinical Practice IV Adult Critical Care**

**4**

\* Prerequisite(s): RESP 3270 and University Advanced Standing

Provides mentored participation in the clinical care of patients in the adult critical respiratory care setting, with emphasis on hemodynamic monitoring and assessment, ventilation/perfusion monitoring, patient/ventilator monitoring and assessment, and airway management.

**RESP 4800**  
**Respiratory Therapy Seminar**

**3**

\* Prerequisite(s): RESP 3270 and University  
 Advanced Standing

Explores problem-based clinical concepts. Includes a comprehensive program review and preparatory focus on the written and clinical simulation examinations of the NBRC. Covers resume writing and interviewing skills.

**RESP 480R**  
**Health Education and Promotion**

**1 to 4**

\* Prerequisite(s): University Advanced  
 Standing and departmental approval.

Provides students an opportunity to pursue independent study in respiratory therapy with a faculty mentor. The health promotion project addresses the growing role of the Respiratory Care Practitioner (RCP) in patient education, public education, and health promotion in general. Requires preparation and presentation of oral and/or written reports. May be repeated for up to 4 credits toward graduation.

**RESP 4890**  
**Principles of Respiratory Care Research  
 and Management**

**3**

\* Prerequisite(s): RESP 3270 and University  
 Advanced standing

Examines research methods and the scientific approach to critical appraisal of research literature. Analyzes scientific data to support approaches to respiratory care. Introduces theories, principles, and skills needed to function in a leadership position. Addresses the key issues confronting respiratory care leaders today.

**RESP 490R**  
**Special Projects in Respiratory Therapy**

**1 to 4**

\* Prerequisite(s): RESP 3210 and University  
 Advanced Standing

Involves independent research projects related to the cardiopulmonary system and/or quality improvement. May be repeated for a maximum of 6 credits toward graduation.

**RESP 4940**  
**Special Topics in Respiratory Therapy**

**1**

\* Prerequisite(s): RESP 2320 and University  
 Advanced Standing

Provides moderated discussion and/or laboratory experiences relating to current events in health care, legislative and ethical issues, and emergent technologies in respiratory care.