

2025-2026 TTC Catalog - Respiratory Care (RES)

RES 110 - Cardiopulmonary Science I

Lec: 2.0 **Lab:** 0 **Credit:** 2.0

Course Offered

Summer

This course focuses on assessment, treatment and evaluation of patients with cardiopulmonary disease.

Corequisite

RES 121

Grade Type: Letter Grade

Restrictions: Restricted to RES majors.

Division: Health Sciences

RES 111 - Pathophysiology

Lec: 2.0 **Lab:** 0 **Credit:** 2.0

Course Offered

Fall

This course is a study of the general principles and analyses of normal and diseased states.

Prerequisite

RES 110

Grade Type: Letter Grade

Division: Health Sciences

RES 112 - Cardiopulmonary Pathophysiology

Lec: 3.0 **Lab:** 0 **Credit:** 3.0

Course Offered

Spring

This course is a study of advanced principles and analyses of normal and diseased states of the cardiopulmonary system.

Prerequisite

RES 111

Grade Type: Letter Grade

Division: Health Sciences

RES 121 - Respiratory Skills I

Lec: 3.5 **Lab:** 1.5 **Credit:** 4.0

Course Offered

Summer

This course includes a study of basic respiratory therapy procedures and their administration. This course presents the theory of equipment and procedures for patients requiring general cardiopulmonary care. Emphasis is on medical gas therapy, aerosol and humidity therapy.

Corequisite

RES 110

Grade Type: Letter Grade

Division: Health Sciences

RES 131 - Respiratory Skills II

Lec: 3.5 **Lab:** 1.5 **Credit:** 4.0

Course Offered

Fall

This course is a study of selected respiratory care procedures and applications. Emphasis is on chest physics therapy, suctioning, airway care and specific procedures regarding airway clearance and maintenance. Lab data, chest tubes, chest X-rays and arterial blood gasses are included. Chest tube drainage systems and chest X-ray interpretation also are included.

Prerequisite

RES 121

Grade Type: Letter Grade

Division: Health Sciences

RES 140 - Introduction to Mechanical Ventilation

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

Course Offered

Spring

This course focuses on theory and techniques used for mechanical ventilation. The student is introduced to protocols and procedures for adjusting mechanical ventilation.

Prerequisite

RES 131

and

RES 246

Grade Type: Letter Grade

Division: Health Sciences

RES 142 - Basic Pediatric Care

Lec: 2.0 **Lab:** 0 **Credit:** 2.0

Course Offered

Fall

This course includes an introduction to basic pediatric and neonatal care.

Prerequisite

RES 243

Grade Type: Letter Grade

Division: Health Sciences

RES 150 - Clinical Applications I

Lec: 0 **Lab:** 12.0 **Credit:** 4.0

Course Offered

Spring

This course is a study of entry-level clinical procedures in the hospital setting.

Corequisite

RES 140

and

RES 243

Grade Type: Letter Grade

Division: Health Sciences

RES 152 - Clinical Applications II

Lec: 0 **Lab:** 9.0 **Credit:** 3.0

Course Offered

Summer

This course includes practice of respiratory care procedures in the hospital setting. An introduction to the critical care setting with emphasis on intensive respiratory care skills, maintenance of artificial airways, continuous mechanical ventilation and physiologic monitoring is provided.

Prerequisite

RES 150

Grade Type: Letter Grade

Division: Health Sciences

RES 205 - Neonatal Respiratory Care

Lec: 2.0 **Lab:** 0 **Credit:** 2.0

Course Offered

Fall

This course focuses on cardiopulmonary physiology, pathology and management of the newborn patient. Neonatal assessment, therapeutic procedures, monitoring, mechanical ventilation and clinical issues in neonatal care are included.

Grade Type: Letter Grade

Division: Health Sciences

RES 210 - Cardiopulmonary Science II

Lec: 3.0 **Lab:** 0 **Credit:** 3.0

Course Offered

Spring

This course is a study of cardiopulmonary, renal and neuromuscular physiology and pathophysiology. Emphasis is on current therapeutic modalities in the care of patients with cardiopulmonary diseases. Etiologic, symptomatic, diagnostic and prognostic facets of each disease are presented.

Prerequisite

RES 150

and

RES 243

and

RES 247

Grade Type: Letter Grade

Division: Health Sciences

RES 220 - Hemodynamic Monitoring

Lec: 1.0 **Lab:** 0 **Credit:** 1.0

Course Offered

Summer

This course is a study of basic hemodynamic monitoring. Included is a study of blood flow utilizing pulmonary artery and central venous pressure catheters.

Corequisite

RES 152

Grade Type: Letter Grade

Division: Health Sciences

RES 235 - Respiratory Diagnostics

Lec: 3.5 **Lab:** 1.5 **Credit:** 4.0

Course Offered

Summer

This course is a study of diagnostic and therapeutic procedures. Methods, equipment, techniques and interpretation of pulmonary function, exercise testing and hemodynamic monitoring are discussed. Other topics include electrocardiography and hyperbaric oxygenation.

Grade Type: Letter Grade

Division: Health Sciences

RES 243 - Mechanical Ventilation II

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

Course Offered

Spring

This course incorporates advanced theory of mechanical ventilation. Liberation from mechanical ventilation is explored.

Prerequisite

RES 111

and

RES 140

Corequisite

RES 247

Grade Type: Letter Grade

Division: Health Sciences

RES 246 - Respiratory Pharmacology

Lec: 2.0 **Lab:** 0 **Credit:** 2.0

Course Offered

Fall

This course includes a study of pharmacologic agents used in cardiopulmonary care. Indications, contraindications, hazards and side effects of pharmacological agents used to treat cardiopulmonary and renal disorders are discussed. Emphasis is on agents commonly administered by the respiratory care practitioner.

Grade Type: Letter Grade

Division: Health Sciences

RES 247 - Advanced Respiratory Pharmacology

Lec: 2.0 **Lab:** 0 **Credit:** 2.0

Course Offered

Spring

This course covers the indications, side effects and hazards of pharmacologic agents used in the intensive care unit. Emphasis is on agents commonly administered by the respiratory care practitioner.

Prerequisite

RES 246

Grade Type: Letter Grade

Division: Health Sciences

RES 249 - Comprehensive Applications

Lec: 2.0 **Lab:** 0 **Credit:** 2.0

Course Offered

Spring

This course includes the integration of didactic and clinical trainers in respiratory care technology. Current issues, problem-solving skills and principles of supervision with emphasis on the role of the first-line supervisor are introduced. Students take a valid written examination and clinical simulation in preparation for national examinations.

Prerequisite

RES 205

Grade Type: Letter Grade

Division: Health Sciences

RES 253 - Advanced Clinical Studies I

Lec: 0 **Lab:** 18.0 **Credit:** 6.0

Course Offered

Fall

This course provides clinical instruction in advanced patient care practice. The student continues to refine techniques applicable to the critically ill patient with an emphasis on prolonged mechanical ventilation.

Prerequisite

RES 152

Grade Type: Letter Grade

Division: Health Sciences

RES 254 - Advanced Clinical Studies II

Lec: 0 **Lab:** 21.0 **Credit:** 7.0

Course Offered

Spring

This course includes clinical instruction in advanced patient care practice. The course offers clinical instruction in pediatric, neonatal and adult critical care. The student respiratory care practitioner is expected to function as a critical care therapist with limited supervision or instruction.

Prerequisite

RES 253

Grade Type: Letter Grade

Division: Health Sciences
