RESPIRATORY CARE (RES)

RES 1010 — Respiratory Care Procedures I

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 1.00 Lab Hours: 4.00

Provides an overview of the equipment and procedures which are used by entry-level respiratory care practitioners to administer floor therapy. This includes: oxygen therapy, humidity and aerosol therapy, volume expansion therapy, and bronchial hygiene therapy. 'C' grade policy applies.

Offered: Fall
Corequisites: RES 1110, RES 1090.

RES 1020 — Respiratory Care Procedures II

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 1.00 Lab Hours: 4.00

Provides an introduction of the student to care and maintenance of various artificial airways, including placement and suctioning techniques. An introduction to positive pressure ventilation will be provided, as well as the many cardiopulmonary resuscitation techniques that are used in the field of Respiratory Care. 'C' grade policy applies.
Offered: Spring
Prerequisites: RES 1010, RES 1110
Corequisites: RES 1120, RES 1410.

RES 1090 — Respiratory Care Pharmacology

Credit Hours: 2.00 Total Contact Hours: 2.00 Lecture Hours: 2.00

Instructs Respiratory Care students in an overview of the cardiopulmonary medications covered by Ohio Law regarding the practice of Respiratory Care and focuses on the general principles of pharmacology and selected drug classifications related to the cardiac, circulatory, respiratory, endocrine, neurological, and musculoskeletal systems. 'C' grade policy applies.
Offered: Fall
Corequisites: RES 1010, RES 1110.

RES 1110 — Cardiopulmonary Anatomy and Physiology

Credit Hours: 4.00 Total Contact Hours: 6.00 Lecture Hours: 2.00 Lab Hours: 4.00

Study in depth the structure and function of the human pulmonary and cardiovascular systems, with particular implications for the respiratory care professional will be discussed. The characteristics and theories of chemical laws, theories of gas behavior, and hemodynamic principles will be thoroughly examined and explored. The basis of oxygen and carbon dioxide transport, diffusion, and gas flow within the human body will be covered, as well as basic cardiac electrocardiogram analysis and interpretation. The laboratory portion of this course will focus on hands on application and real world implications of the topics covered in lecture. Students will be permitted to explore and learn more about human pulmonary and cardiac anatomy and physiology through the use of anatomical models, interactive demonstrations, human patient simulator models, and cadavers. 'C' grade policy applies.
Offered: Fall
Prerequisites: BHS 1000
Corequisites: RES 1010, RES 1090.

RES 1120 — Pulmonary Diagnostics

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 1.00 Lab Hours: 4.00

Includes a survey of the many types of tests used to diagnose and treat illness in the field of respiratory care. Included will be the principles and techniques used in the measurement and interpretation of Pulmonary Function Studies. Acid-based physiology and factors determining normal and abnormal blood gases as well as interpretation and application of the results will also be covered. Hemodynamics and other types of critical care monitoring will be introduced and explained as they pertain to the critical care respiratory patient. 'C' grade policy applies.
Offered: Spring
Prerequisites: RES 1010, RES 1090, RES 1110
Corequisites: RES 1020, RES 1410.

RES 1410 — Clinical Experience I

Credit Hour: 1.00 Total Contact Hour: 5.00 Clinical/Other Hour: 5.00

Provides clinical experience in the maintenance and safe handling of equipment and oxygen therapy, basic respiratory therapeutic procedures, patient assessment skills, collecting and gathering medical information from the electronic and hard copy patient chart, aerosol therapy, humidity therapy, lung volume expansion therapy, metered dose inhaler use, and bronchial hygiene therapy. Students will participate, as available, in equipment sterilization and disinfection procedures. A valid CPR card is required for all clinical courses. 'C' grade policy applies.
Offered: Spring
Prerequisites: RES 1010, RES 1090, RES 1110
Corequisites: RES 1020, RES 1120.

RES 1420 — Clinical Experience II

Credit Hours: 2.00 Total Contact Hours: 16.00 Clinical/Other Hours: 16.00

Provides clinical experience in positive pressure therapy, aerosol therapy, and a variety of pulmonary function tests. Students will gain further experience with bronchial hygiene therapies, including postural drainage and chest percussion. Students will perform arterial blood gas sampling on hospital patients, and will observe/ assist with maintenance of blood gas analyzer machines. Surgery rotations for intubation experience will be provided. 'C' grade policy applies.
Offered: Summer
Prerequisites: RES 1020, RES 1120, RES 1410
Corequisites: RES 2100, RES 2230.

RES 1990 — Independent Study in RES

Credit Hours: 2.00 Total Contact Hours: 2.00 Lecture Hours: 2.00

Provides the Respiratory student the opportunity for in depth work on a respiratory topic. The first week of the term, the student will meet with the chairperson and submit in writing the proposed topic of study and the plan. The chairperson or another Respiratory faculty will provide continued support throughout the project. 'C' grade policy applies.
Offered: Spring.

RES 2100 — Respiratory Procedures III

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 1.00 Lab Hours: 4.00

Provides instruction in the theory and procedures with advanced respiratory care as associated with mechanical ventilation. This course will explore the various devices and monitoring techniques used in the management of ventilators. Students will also be given the opportunity to accomplish experiments simulating set-up modification, operation, and troubleshooting of various ventilators. 'C' grade policy applies.
Offered: Fall
Corequisites: RES 1420, RES 2230.

RES 2200 — Respiratory Procedures IV

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 1.00 Lab Hours: 4.00

Provides an in-depth study of the respiratory management of both the neonatal and pediatric patient. Emphasis will be placed on the development of the cardiorespiratory system in relation to pathologies and critical care management. Essential knowledge, skill and abilities required for the practice of respiratory care in the perinatal and pediatric specialty area will be presented. Laboratory instruction for this course will focus on the critical care equipment and therapeutic modalities required for the care of the neonatal, infant, and pediatric populations. 'C' grade policy applies.

Offered: Fall

Prerequisites: RES 2100

Corequisites: RES 2410.

RES 2230 — Respiratory Disease

Credit Hours: 2.00 Total Contact Hours: 2.00 Lecture Hours: 2.00

Provides a full review clinical assessment skills and introduces Respiratory Care students to techniques used in diagnosing cardiopulmonary disease. A wide variety of lung diseases will be explored in a problem-based learning format which integrates case studies, clinical simulations and use of Human Patient Simulator. Emphasis will be placed on the basic pathologies of each disease and a review of treatment options will be discussed. 'C' grade policy applies.

Offered: Summer

Prerequisites: RES 1120, RES 1410

Corequisites: RES 1420, RES 2100, RES-2100L.

RES 2410 — Advanced Clinical Experience I

Credit Hours: 3.00 Total Contact Hours: 24.00 Clinical/Other Hours: 24.00

Provides advanced clinical practice in the art of patient assessment and testing that is essential to the discipline. Various clinical tests including arterial blood gas measurement, chest radiographic imaging, and cardiac and pulmonary stress testing will be provided to the student during clinical rotations to correlate findings with patient disease states and conditions. Students will take part in physician rounds, and attend physician lectures where patient case studies will be presented. Students will begin rotations in the adult critical care setting, where they will gain experience in managing artificial airways, mechanical ventilators, and hemodynamic measurement equipment. Students will also take part in rotations with department managers to gain an appreciation for the skills needed to manage a respiratory care department, while meeting quality assurance standards. 'C' grade policy applies.

Offered: Fall

Prerequisites: RES 1420, RES 2230, RES 2100

Corequisites: RES 2200.

RES 2430 — Advanced Clinical Experience II

Credit Hours: 4.00 Total Contact Hours: 20.00 Clinical/Other Hours: 20.00

Provides further clinical experiences that will include continued rotations in adult critical care settings, as well as new specialty rotations in such areas as neonatal/pediatrics, sleep disorder clinics, home care, skilled nursing facilities, and HPS. Students will also gain clinical experience in the care of neonatal patients through rotations in the labor & delivery and neonatal ICU areas. The clinical experience will culminate in a preceptorship rotation in which the student gains real-world experience through management of a full work assignment, under the watchful eye of an assigned mentor. 'C' grade policy applies.

Offered: Spring

Prerequisites: BHS 2100, BHS 2200, BHS 2300, RES 2410

Corequisites: RES 2510.

RES 2500 — Respiratory Care Seminar

Credit Hour: 1.00 Total Contact Hour: 1.00 Lecture Hour: 1.00

Review of current best practices and evidence-based research in the field of respiratory care, with emphasis on enhancing the students' ability to critically think while solving complex patient care problems in a variety of scenarios in preparation for professional practice. A content analysis of the current NBRC Entry-Level exam will be included.

Offered: Spring

Prerequisites: RES 2200, RES 2410

Corequisites: RES 2430, RES 2510.

RES 2510 — Respiratory Care Capstone

Credit Hour: 1.00 Total Contact Hour: 1.00 Lecture Hour: 1.00

Allows students to demonstrate their proficiency by integrating technical knowledge with core skills and abilities. Study will be done of realistic clinical problems and situations with emphasis on analyzing and evaluating these problems to formulate acceptable respiratory care plans. Such care plans shall include selection of appropriate equipment, drugs, laboratory tests, equipment parameters and changes, treatment modalities and suggestions to physicians. Practice will be provided in the necessary techniques to take the NBRC clinical simulation examination. Computer simulations are an integral part of this course. The course will include an e-portfolio assignment and an exit evaluation of critical thinking and writing. 'C' grade policy applies.

Offered: Spring

Prerequisites: RES 2100, RES 2410

Corequisites: RES 2430.

RES 2610 — Polysomnography Clinical I

Credit Hour: 1.00 Total Contact Hour: 5.00 Clinical/Other Hour: 5.00

Provides clinical experience in an orientation to the sleep center, patient assessment, preparation, hook-up, monitoring, and education. Opportunities in stage recognition, troubleshooting, equipment preparation and disinfecting, and documentation will also be offered to the participant. A valid CPR card is required in all clinical courses. 'C' grade policy applies.

Offered: Fall

Prerequisites: Current second year Respiratory Care student or currently licensed Respiratory Care Practitioner.

RES 2620 — Polysomnography Clinical II

Credit Hour: 1.00 Total Contact Hour: 5.00 Clinical/Other Hour: 5.00
Provides clinical experience and orientation to the sleep center, patient assessment, preparation, hook-up, monitoring, and education. Opportunities in stage recognition, troubleshooting, equipment preparation and disinfecting, and documentation will also be offered to the participant. A valid CPR card is required in all clinical courses. 'C' grade policy applies.
Offered: Fall
Prerequisites: RES 2710, RES 2610
Corequisites: RES 2720, RES 2720L.

RES 2710 — Polysomnography Technology I

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 2.00 Lab Hours: 3.00
Introduces the student to sleep medical technology, instrumentation set up and calibration of polysomnographic equipment, and recording and monitoring the patient during a polysomnogram. This course is the first in a two course sequence and is designed for the Respiratory Therapist wanting to enter into sleep technology. 'C' grade policy applies.
Offered: Fall
Prerequisites: RES 1420, RES 2230, or currently licensed Respiratory Care Practitioner.

RES 2710L — Polysomnography Technology I Lab

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 2.00 Lab Hours: 3.00
Accompanies RES 2710.

RES 2720 — Polysomnography Technology II

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 2.00 Lab Hours: 3.00
Provides the student with an introduction to the different types of sleep studies and the purpose of each. The student will learn about a variety of sleep disorders, the symptoms of each, and pharmacologic and non-pharmacologic treatments. Scoring of Polysomnograms and sleep stages will also be discussed. 'C' grade policy applies.
Offered: Fall
Prerequisites: RES 2610, RES 2710.

RES 2720L — Polysomnography Technology II Lab

Credit Hours: 3.00 Total Contact Hours: 5.00 Lecture Hours: 2.00 Lab Hours: 3.00
Accompanies RES 2720.