

Degree Description

Accredited by the Commission on Accreditation for Respiratory Care (CoARC) (1241 Harwood Road, Bedford, TX 76021-4244; www.coarc.com)

The respiratory care curriculum leads to an Associate of Applied Science degree in Respiratory Care Technology. Students who complete the associate degree curriculum will be eligible to complete the examinations administered by the National Board for Respiratory Care (NBRC) for Certification (CRT) and Registry (RRT).

The respiratory therapist applies scientific knowledge and theory to practical clinical problems of respiratory care. The knowledge and skills for performing various respiratory care modalities are achieved through didactic, laboratory and clinical preparation. Clinical training is provided in routine and special procedures applicable to pediatric, adult and geriatric patients. Respiratory therapy personnel are employed in hospitals, nursing care facilities, clinics, and institutions or companies providing home care.

Applicants for this program must meet admission requirements established by the college. If developmental courses are needed for Texas Success Initiative requirements, it is recommended that such courses be completed before the fall semester of the first year of the program.

A student has five years to complete requirements for the Associate of Applied Science Degree in Respiratory Care after official enrollment into the program. Contact the program director for more information.

Marketable Skills:

Upon completion, the graduate will:

1. Demonstrate the ability to comprehend, apply, and evaluate clinical information relevant to their roles as a registry-level respiratory care practitioner.
2. Demonstrate the ability to comprehend, apply, and evaluate clinical information
3. Demonstrate the technical proficiency.
4. Demonstrate the technical skills needed to provide respiratory care accurately and efficiently in laboratory and clinical areas.
5. Demonstrate professional behavior consistent with employer expectations as a registry-level respiratory care practitioner.
6. Demonstrate effective written and oral communication skills in the classroom, clinical laboratory, and all areas of the clinical setting.
7. Display a professional attitude based on the American Association for Respiratory Care's "Code of Ethics."

Program Prerequisites

BIOL 2404 Anatomy & Physiology (specialized)	4 hours
MATH 1314 College Algebra <i>or</i> MATH 1342 Elementary Statistical Methods	3 hours
ENGL 1301 Composition I	3 hours
RSPT 1227 Applied Physics for Respiratory Care	2 hours
RSPT 1371 Introduction to Respiratory Care	3 hours

Total prerequisite hours: 15 hours

Semester I	Hours
RSPT 1266 Practicum - Respiratory Care Therapy/Therapist	2 hours
RSPT 1340 Advanced Cardiopulmonary Anatomy & Physiology	3 hours
RSPT 1410 Respiratory Care Procedures I	4 hours
RSPT 2317 Respiratory Care Pharmacology	3 hours
	12 hours

Summer Semester	Hours
RSPT 1260 Clinical - Respiratory Care Therapy/Therapist	2 hours
RSPT 1411 Respiratory Care Procedures II	4 hours
RSPT 2310 Cardiopulmonary Disease	3 hours
	9 hours

Semester III	Hours
RSPT 1267 Practicum - Respiratory Care Therapy/Therapist	2 hours
RSPT 2258 Respiratory Care Patient Assessment	2 hours
RSPT 2414 Mechanical Ventilation	4 hours
RSPT 2305 Pulmonary Diagnostics	3 hours
PHIL 2306 Introduction to Ethics	3 hours
	14 hours

Semester IV	Hours
RSPT 1241 Respiratory Home Care/Rehabilitation	2 hours
RSPT 2233 Respiratory Care Case Management	2 hours
RSPT 2266 Practicum - Respiratory Care Therapy/Therapist	2 hours
RSPT 2353 Neonatal/Pediatric Cardiopulmonary Care	3 hours
PSYC 2301 General Psychology	3 hours
	12 hours

Summer Semester	Hours
RSPT 2230 Respiratory Care Examination Preparation	2 hours
RSPT 2267 Practicum - Respiratory Care Therapy/Therapist	2 hours
	4 hours

Total hours: 51 hours

Course Descriptions

BIOL 2404 Anatomy & Physiology (specialized)

Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content may be either integrated or specialized. Semester Hours 4 (3 lec/3 lab)

MATH 1314 College Algebra

In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included. Graphing calculator required. Prerequisite: TSI math complete or MATH 0311. Semester Hours 3 (3 lec)

MATH 1342 Elementary Statistical Methods

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended. Graphing calculator required. Prerequisite: TSI math complete or MATH 0308 or completion of college-level math course or consent of division chair. Semester Hours 3 (3 lec)

ENGL 1301 Composition I

Intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis is on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus is on writing the academic essay as a vehicle for learning, communication, and critical analysis. Prerequisite: TSI complete in Reading and Writing or the equivalent. Semester Hours 3 (3 lec)

RSPT 1227 Applied Physics for Respiratory Care

Review of the theoretical and practical applications of mathematics and physics with focus on the applicability and clinical utility of the modalities, techniques, procedures, equipment, and diagnostic tests utilized in respiratory care. Includes the basic principles of mechanics, gas laws, fluid dynamics and thermal dynamics, laws of physics applied to the therapeutic procedures and diagnosticius tests in respiratory care. Semester Hours 2 (2 lec)

RSPT 1371 Introduction to Respiratory Care

An introduction to the field of respiratory care. Semester Hours 3 (3 lec)

RSPT 1266 Practicum - Respiratory Care Therapy/Therapist

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Provides clinical practice to develop affective and psychomotor (and reinforce cognitive) skills to include: arterial blood gas sampling and analysis, lung expansion therapy, postural drainage and percussion, manual resuscitation devices - CPR, pulse oximetry, patient assessment (patient history, vital signs, and physical assessment), medical terminology and symbols, infection control, medical gas therapy, oxygen analyzers, and humidity and aerosol therapy. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Prerequisite: RSPT 1227 and RSPT 1371. Acceptance into Respiratory Care Technology program. Semester Hours 2 (16 clinical hours/week)

RSPT 1340 Advanced Cardiopulmonary Anatomy & Physiology

Provides an advanced presentation of anatomy and physiology of the cardiovascular and pulmonary systems. Prerequisites: RSPT 1227 and RSPT 1371. Acceptance into Respiratory Care Technology program. Semester Hours 3 (3 lec)

RSPT 1410 Respiratory Care Procedures I

Essential knowledge of the equipment and techniques used in the treatment of cardiopulmonary disease. Prerequisite: RSPT 1371 and 1227. Acceptance into Respiratory Care Technology program. Semester Hours 4 (3 lec/4 lab)

RSPT 2317 Respiratory Care Pharmacology

A study of drugs that affect the cardiopulmonary systems. Emphasis on classification, route of administration, dosages/calculations, and physiological interactions. Prerequisite: RSPT 1227 and RSPT 1371. Acceptance into Respiratory Care Technology program. Semester Hours 3 (3 lec)

RSPT 1260 Clinical - Respiratory Care Therapy/Therapist

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Provides clinical practice to develop affective and psychomotor (and reinforce cognitive) skills to include: arterial blood gas sampling and analysis, lung expansion therapy, postural drainage and percussion, manual resuscitation devices - CPR, pulse oximetry, patient assessment (patient history, vital signs and physical assessment), medical terminology and symbols, infection control, medical gas therapy, oxygen analyzers and humidity and aerosol therapy. On-site clinical instruction, supervision, evaluation and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Prerequisite: RSPT 1266. Semester Hours 2 (11 clinical hours/week)

RSPT 1411 Respiratory Care Procedures II

Develops essential knowledge and skills of airway care and mechanical ventilation. Airway care includes indications, techniques, equipment, and hazards and complications. Mechanical ventilation includes indications, initiation, modes, clinical application, management, complications, and weaning. Content areas also include: pulse oximetry, arterial blood gas sampling and interpretation, intravenous catheter insertion, and 12 lead ECG procedure. Prerequisites: RSPT 1410 and RSPT 1227. Semester Hours 4 (3 lec/4 lab)

RSPT 2310 Cardiopulmonary Disease

Eitology, pathogenesis, pathology, diagnosis, history, prognosis, manifestations, treatment, and detection of cardiopulmonary diseases. Prerequisites: Successful completion of first semester RSPT courses with a grade of "C" or better. Semester Hours 3 (3 lec)

RSPT 1267 Practicum - Respiratory Care Therapy/Therapist

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Provides clinical practice to develop affective and psychomotor (and reinforce cognitive) skills to include: arterial blood gas sampling and analysis, therapeutic procedures to achieve adequate spontaneous and artificial ventilation, as well as review lung expansion therapy, postural drainage and percussion, artificial airways, manual resuscitation devices, tracheostomy care, suctioning, pulse oximetry, patient assessment (patient history, vital signs, and physical assessment), medical terminology and symbols, infection control, medical gas therapy, humidity and aerosol therapy, non invasive positive pressure ventilation, and invasive mechanical ventilatory support. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid learning experiences. Prerequisite: Successful completion of two semester RSPT courses with a grade of "C" or better. Semester Hours 2 (16 clinical hours/week)

RSPT 2258 Respiratory Care Patient Assessment

Integration of patient examination techniques including: patient history and physical exam, lab studies, X-ray, pulmonary function, arterial blood gases, and invasive and non-invasive hemodynamics. Prerequisite: Successful completion of two semester RSPT courses with a grade of "C" or better. Semester Hours 2 (2 lec)

RSPT 2414 Mechanical Ventilation

The study of mechanical ventilation with emphasis on ventilator classification, methods, principles, and operational characteristics. Also included are the indications, complications, physiologic effects/principles of mechanical ventilation. Prerequisite: RSPT 1411. Semester Hours 4 (3 lec/4 lab)

RSPT 2305 Pulmonary Diagnostics

The theories and techniques involved in pulmonary function testing, blood gas analysis, quality control, overnight oximetry, and capnography. Prerequisites: Successful completion of two semester RSPT courses with a grade of "C" or better. Semester Hours 3 (3 lec)

PHIL 2306 Introduction to Ethics

The systematic evaluation of classical and/or contemporary ethical theories concerning the good life, human conduct in society, morals, and standards of value. Semester Hours 3 (3 lec)

RSPT 1241 Respiratory Home Care/Rehabilitation

A study of respiratory home care/rehabilitation equipment, procedures, and patient education. Prerequisite: Successful completion of three semester RSPT courses with a grade of "C" or better. Semester Hours 2 (2 lec)

RSPT 2233 Respiratory Care Case Management

Investigation, organization, and presentation of case studies. Prerequisite: Successful completion of three semester RSPT courses with a grade of "C" or better. Semester Hours 2 (2 lec)

RSPT 2266 Practicum - Respiratory Care Therapy/Therapist

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Provides clinical practice to develop affective and psychomotor (and reinforce cognitive) skills to include: advanced adult, pediatric, and neonatal patient assessment/history, vital signs and physical assessment, basic bedside spirometry and advanced pulmonary function testing, oximetry, arterial line sampling, blood gas analysis and interpretation, advanced medical terminology and medical symbols and definitions, infection control, invasive airway management/monitoring, intensive care radiological interpretation, emergency life support/resuscitation, intensive patient care, skills in chest physiotherapy, medical gas therapy, oxygen analysis, mechanical ventilation, humidity/aerosol therapy. On-site clinical instruction, supervision, evaluation and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Prerequisite: Successful completion of three semester RSPT courses with a grade of "C" or better. Semester Hours 2 (16 clinical hours/week)

RSPT 2353 Neonatal/Pediatric Cardiopulmonary Care

A study of neonatal and pediatric cardiopulmonary care. The student will describe normal and abnormal neonatal and pediatric anatomy and physiology; and select, adjust, check, and modify equipment to manage the high risk neonatal or pediatric patient. Prerequisite: RSPT 2414. Semester Hours 3 (3 lec)

PSYC 2301 General Psychology

General Psychology is a survey of the major psychological topics, theories and approaches to the scientific study of behavior and mental processes. NOTE: Must have passed the reading portion of the TSI Assessment or have credit for INRW 0402. Semester Hours 3 (3 lec)

RSPT 2230 Respiratory Care Examination Preparation

Comprehensive review to optimize respiratory care credentialing exam success. Test matrices and exam content areas for selected exams will be presented. Prerequisite: RSPT 2266. Semester Hours 2 (1 lec/2 lab)

RSPT 2267 Practicum - Respiratory Care Therapy/Therapist

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Provides clinical practice to develop affective and psychomotor (and reinforce cognitive) skills to include: advanced adult, pediatric, and neonatal patient assessment/history, vital signs and physical assessment, bedside spirometry and pulmonary function testing, oximetry, arterial line sampling, analysis and interpretation, advanced medical terminology and medical symbols definitions, infection control, invasive airway placement/management/monitoring, intensive care radiological interpretation, emergency life support/resuscitation, critical and intensive patient care, skills in chest physiotherapy, medical gas therapy, oxygen analysis, mechanical ventilation, humidity/aerosol therapy skills and knowledge. Specific learning objectives are developed by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Prerequisite: Successful completion of all previous semesters RSPT courses with a grade of "C" or better. Semester Hours 2 (18 clinical hours/week)
