Department of Respiratory Care

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The Bachelor of Science in Respiratory Care Program prepares students to practice as respiratory care professionals and take their place as a key healthcare team member. Skilled in assessing patients with breathing disorders in the emergency room, intensive care units and many other areas in healthcare facilities, respiratory therapists work directly with physicians on newborn, pediatric or adult patients to analyze oxygen levels and breathing difficulty. Therapists administer medications to relieve breathing distress, provide pulmonary/lung therapies, and conduct lung diagnostics for all ages. Graduates find employment in many settings such as hospitals, pulmonary rehabilitation clinics, doctors offices, sleep labs, homecare, and air-life transport teams working with patients in the emergency room, newborn/pediatric/adult intensive care units, and many other areas.

Respiratory care (RC) majors take classes on the San Marcos campus and gain clinical experience in area hospitals. Students successfully admitted to the program must complete the sequenced curriculum within the cohort group. Individuals taking core courses prior to applying for admission to the RC program should contact the College of Health Professions’ Advising Office. Students completing an associate degree in RC from another university or college are eligible to apply for admission to the B.S.R.C. Program at Texas State for bachelor degree completion. For information on this option, see the department chair. The B.S.R.C. Program is accredited by the Commission on Accreditation for Respiratory Care (CoARC) and qualifies graduates to take national board credentialing exams offered by the National Board for Respiratory Care immediately upon completion.

The department also offers a graduate certificate in Polysomnographic Technology (sleep studies) at the graduate level that is fully accredited by CoARC and qualifies individuals to sit for national board credentialing exams immediately upon completion. The polysomnographic (PSG) graduate certificate is comprised of six courses (15 credit hours) with three courses offered each fall and spring. Individuals credentialed in PSG provide diagnostic and therapeutic treatment for those suffering from sleep disorders such as obstructive sleep apnea, insomnia, narcolepsy, and other conditions. Admission for the Polysomnographic Technology certificate is granted each summer for a cohort starting in the fall. Please refer to the Graduate catalog for admission requirements and course descriptions.

Admission Process

Application for admission to the RC program must be made to the RC department in addition to regular university admission procedures. All applicants must have an overall GPA of 2.50 to apply. It is highly recommended that individuals interested in applying for the RC program complete RC 2213 prior to application. Admission is competitive and enrollment is limited depending on student/faculty ratios in the clinical phase of the program. All courses must be taken in sequence and completed with a grade of C or higher in order to progress to the next semester in the curriculum. Due to performance standards of the profession, students must meet specific ADA standards in accordance with physical and emotional requirements of the academic program in order to qualify for admission.

Program Progression

Successful program progression requires students to complete each semester in a lock-step sequence with a grade of “C” or higher in all RC courses. According to departmental policy, students with a grade of less than a “C” in a RC course will be ineligible to continue the program and must reapply to the program the following year. To be considered for program readmission, all original program admission criteria must be met. If readmitted, an assessment of clinical skills will be required to determine appropriate clinical placement in the curriculum sequence.

Graduation

Requirements for B.S.R.C. completion and graduation include a Texas State GPA of 2.0 with a RC major GPA of 2.25.

Immunization Requirements

It is a policy of the College of Health Professions that each student must provide the College Health Report completed by a physician or licensed healthcare provider, and must complete specific immunizations before being placed in a clinical or internship assignment. Information on these requirements and forms may be obtained through the departmental office.

Background Checks and Drug Screening

As a condition for placement in some professional practice sites, all students are required to have a background check and/or drug screening to meet requirements of individual sites. Information on the drug screening process will be provided by the department. Previous misdemeanor or felony convictions under various titles of the Texas Penal Code may affect eligibility for state respiratory care practitioner license status following graduation and may affect admission consideration.

Bachelor of Science in Respiratory Care (B.S.R.C.)

- Major in Respiratory Care (http://mycatalog.txstate.edu/undergraduate/health-professions/respiratory-care/bsrc)

Information about graduate programs can be found in the Graduate Catalog (http://mycatalog.txstate.edu/graduate).

Courses in Respiratory Care (RC)

RC 2213. Introduction to Respiratory Care.
This course offers an in-depth overview of the respiratory care profession to acquaint the student with the responsibilities of the respiratory therapist as part of healthcare team. Progression of the profession, career opportunities, past and future impact of profession on patient recovery and health maintenance, and medical gas therapy will be covered. About Introduction to Respiratory Care

2 Credit Hours. 2 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter about Introduction to Respiratory Care
This course examines the most common pulmonary function tests, their
techniques, and the pathophysiology that may be evaluated by each test.
Pulmonary function equipment, calibration, and the American Thoracic
Society guidelines will be discussed. Laboratory practice of performing
the tests will be provided to develop skills for testing patients.
about Pulmonary Function Testing
1 Credit Hour. 0 Lecture Contact Hours. 4 Lab Contact Hours.
Grade Mode: Standard Letter

RC 3212. Pharmacology.
A comprehensive study of pharmacology principles. Receptor theory,
clinical applications of medications, and historical analysis of first-
generation medications will be covered. Current medication trends and
recommendations are also examined.
about Pharmacology
2 Credit Hours. 2 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

RC 3232. Hemodynamics.
This course is an advanced study of cardiovascular hemodynamic
measurements. Normal cardiovascular physiology and measures are
examined, as well as variations caused by disease. Current clinical trends
and practices in hemodynamic procedures are also explored.
about Hemodynamics
2 Credit Hours. 2 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

RC 3313. RC Clinical Practice I.
This course provides an introduction to respiratory care clinical skills,
including vital signs, chest assessment, infection control, aerosolized
medication delivery, oxygen therapy, hyperinflation therapy, and airway
clearance. This course prepares the student for direct patient care to be
performed in more advanced courses. Direct patient care is performed
under close supervision.
about RC Clinical Practice I
3 Credit Hours. 0 Lecture Contact Hours. 16 Lab Contact Hours.
Grade Mode: Standard Letter

RC 3314. Respiratory Care Instrumentation.
Through lectures and lab exercises, students are acquainted with
concepts of design, function, and operation of basic respiratory care
equipment. Oxygen cylinders, regulators, flowmeters, oxygen analyzers,
oximeters, oxygen adjuncts, humidifiers, nebulizers, airways, and
pressure cycled ventilators will be covered. The course also covers
respiratory pharmacology, decontamination of equipment, and arrhythmia
recognition.
about Respiratory Care Instrumentation
3 Credit Hours. 2 Lecture Contact Hours. 3 Lab Contact Hours.
Grade Mode: Standard Letter

RC 3315. Cardiopulmonary - Renal Anatomy & Physiology.
This course provides an in-depth human gross anatomy study of the
cardiac, respiratory, and renal systems. Clinical application of pulmonary
anatomy and physiology will also be explored.
about Cardiopulmonary - Renal Anatomy & Physiology
3 Credit Hours. 2 Lecture Contact Hours. 3 Lab Contact Hours.
Grade Mode: Standard Letter

RC 3316. Fundamentals of Respiratory Care.
This course provides a study of theories and modalities utilized in
delivering, monitoring, and evaluating basic respiratory therapeutics to
patients with compromised respiratory function in various healthcare
settings. Aspects of artificial ventilation, arterial blood gas analysis, lung
volume diagnostics, and hyperinflation intervention will be covered in
patient scenarios.
about Fundamentals of Respiratory Care
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

RC 3321. Cardiopulmonary Pathology.
As an introduction to the assessment, treatment, and pathophysiology
of respiratory diseases, this course focuses on the signs, symptoms,
etiology, pathophysiology, diagnosis and treatment of selected diseases.
Utilizing clinical simulation software to develop critical thinking regarding
assessment, diagnostic data gathering. (WI).
about Cardiopulmonary Pathology
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Writing Intensive
Grade Mode: Standard Letter

This course provides students with an in-depth study of selected
respiratory care techniques with an emphasis on the care of critically ill
patients. Critical skills and knowledge of mechanical ventilation, bedside
diagnostic techniques, patient monitoring, and rehabilitation are explored
in the critical care setting.
about Critical Care Concepts
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

RC 3323. RC Clinical Practice II.
Students perform clinical procedures and interact with patients and
professional personnel in a healthcare institution under the supervision
of a respiratory therapist. Students gain direct patient care experience as
presented in medical/surgical and pediatric clinical situations. Preparatory
instruction is provided for mechanical ventilation and other critical care
procedures.
about RC Clinical Practice II
3 Credit Hours. 0 Lecture Contact Hours. 16 Lab Contact Hours.
Grade Mode: Standard Letter
RC 3324. Critical Care Instrumentation.
A comprehensive study of advanced equipment and technology utilized in the critical care, homecare, pulmonary rehabilitation and blood gas lab settings. Lectures and class activities will detail hardware for hemodynamic monitoring, supplemental oxygen administration, noninvasive monitoring, blood gas measurement, quality control and assurance and mechanical ventilator concepts.

Grade Mode: Standard Letter
Excluding from 3-peat Processing

RC 3333. RC Clinical Practice III.
A supervised clinical education experience in which the student administers advanced respiratory therapies to patients in the adult critical care setting. Diagnostic and monitoring procedures, including arterial blood gases, bedside physiologic monitoring, airway care, advanced pulmonary function testing, ventilator management will be performed according to physician orders.

Grade Mode: Standard Letter
Excluding from 3-peat Processing

RC 3334. Neonatal Respiratory Care.
An in-depth study of neonatal utero development, fetal lung development, fetal circulation, and cardiovascular changes at birth. Neonatal respiratory emergencies, neonatal respiratory diseases and management, congenital defects, and respiratory care procedures specific to the neonate will be discussed. A specific emphasis on neonatal mechanical ventilation will be included.

Grade Mode: Standard Letter
Excluding from 3-peat Processing

RC 3335. RC Clinical Practice IV.
This course provides an advanced clinical education experience in respiratory therapeutics on patients in the adult critical care setting. Appropriate clinical expectations include experience in arterial blood gas procurement and measurement, bedside physiologic monitoring, airway care, and monitoring of mechanical ventilation in the intensive care unit.

Grade Mode: Standard Letter
Excluding from 3-peat Processing

RC 4211. Respiratory Care Research.
This course provides an introduction to applied experimental design, research ethics, and data analysis focusing on the respiratory care profession. Students will participate in each step the research process from developing a personal research hypothesis and research design through IRB submission. Prerequisite: HP 3302 or equivalent.

Grade Mode: Standard Letter
Excluding from 3-peat Processing

RC 4212. Critical Care Clinical Simulation.
This course will prepare respiratory care students to successfully navigate multiple clinical simulation patient cases. Clinical simulations covered reflect real-life patient scenarios and mirror the content found on national board exams. Students will receive focused attention on board exam review and evidence-based care.

Grade Mode: Standard Letter
Excluding from 3-peat Processing

RC 4223. ICU Internship.
Through affiliations with agencies, hospitals and selected treatment centers, the student interns in the intensive care setting by providing patient care and administering critical care therapeutics. Analysis and clinical application of advanced ventilator care of patients is emphasized along with patient care diagnostics and management in the ICU.

Grade Mode: Credit/No Credit
Excluding from 3-peat Processing

RC 4224. Research Seminar.
A study of the research process from a review of research design methodology implementation including data collection, statistical analysis, and presentation of a research proposal on a topic in the respiratory care discipline. The course provides direct research experience culminating in a research paper and presentation. Prerequisite: RC 4211.

Grade Mode: Standard Letter
Excluding from 3-peat Processing

RC 4225. Specialization Internship.
This course provides the student with an internship opportunity to gain clinical experience in sub-specialty areas including pediatrics, adult intensive care, neonatal intensive care, pulmonary function testing, home care/durable medical equipment, subacute care, pulmonary rehabilitation, polysomnography, education, and research. Specific specialty offerings will be based on clinical availability.

Grade Mode: Credit/No Credit
Excluding from 3-peat Processing

This course provides an in-depth study of specific adult mechanical ventilators addressing traditional and proposed ventilator classification, various methods of operation, parameter interrelationships and ventilator patient monitoring. Lectures and class activities will focus on ventilator analysis of several contemporary volume-, time-, pressure- and flow-cycled ventilators with advanced graphics interpretation required.

Grade Mode: Standard Letter
Excluding from 3-peat Processing

RC 4315. Advanced Ventilator Concepts.
This course provides an in-depth study of specific adult mechanical ventilators addressing traditional and proposed ventilator classification, various methods of operation, parameter interrelationships and ventilator patient monitoring. Lectures and class activities will focus on ventilator analysis of several contemporary volume-, time-, pressure- and flow-cycled ventilators with advanced graphics interpretation required.

Grade Mode: Standard Letter
Excluding from 3-peat Processing
RC 4316. RC Clinical Practice IV.
This course provides an advanced intensive care clinical education requiring students to monitor and administer critical care therapeutics on assigned patients in the adult and neonatal critical care setting. Cardiopulmonary diagnostic experience will be gained through arterial blood gas and co-oximetry assessment with ventilator graphic analysis.

3 Credit Hours. 0 Lecture Contact Hours. 16 Lab Contact Hours.
Grade Mode: Standard Letter

RC 4317. Pulmonary Rehabilitation.
This course is designed to introduce students to the medical, ethical, and insurance reimbursement issues of pulmonary rehabilitation, homecare, and sleep diagnostic facilities. The role of therapists in case management, treatment requirements, and discharge planning along with the impact of legislation, regulations, and politics will be explored.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

RC 4318. Independent Study in Respiratory Care.
This course provides the student an in-depth study on a topic or healthcare problem impacting respiratory care. The course may be repeated for credit with a different emphasis.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing
Grade Mode: Standard Letter

RC 4321. Leadership and Management for Respiratory Care Professionals.
This course is designed to comprehensively examine the dynamic evolution of respiratory care as a profession. The role of the respiratory care professional in the areas of leadership, management, and professional ethics will be explored with regards to the profession’s impact on legislation, regulation, and politics. (WI).

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Writing Intensive
Grade Mode: Standard Letter

RC 4322. RC Practitioner Seminar.
Students will research and present selected case studies by students to physicians, therapists, and colleagues. Presentations will emphasize total patient management with etiology, symptoms, pathophysiology, diagnosis, and treatment of specific diseases including asthma, pulmonary embolism, CHF, COPD, ARDS, neurologic diseases, inhalational injury, pneumonia, sleep disordered breathing, AIDS, and drug overdose. (WI).

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Writing Intensive
Grade Mode: Standard Letter