Respiratory Care Degree

This degree is preparation for licensure as a Respiratory Care Practitioner in the state of California as a Respiratory Care Practitioner at the Registered Respiratory Therapist level. It focuses on diagnostic procedures, treatment, and management of patients with conditions affecting the cardiopulmonary system. Course work includes physical assessment, medical gas therapies, mechanical life support, airway care, pharmacology, neonatal/pediatric therapy, and specialized cardiopulmonary procedures.

NOTE: All degree major courses require a grade of “C” or better.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

• discuss patient/client reports with members of the health care network.
• collect patient information relevant to the diagnosis and treatment of patients affected by pulmonary disease.
• recommend appropriate treatment plans based upon auditory, tactile, and visual feedback.
• record assessment findings, treatment plans, and recommendations for care in medical records.
• chart patient care in accordance with local, regional, and national standards.
• categorize patients affected by pulmonary disease as having acute or chronic conditions.
• define pulmonary disorders as restrictive or obstructive disease.
• comply with ethical standards of the profession.

The program is accredited by the Commission on Accreditation for Respiratory Care (CoARC), 1248 Harwood Rd., Bedford, TX 76021; (817) 283-2835. Further information regarding the respiratory care profession is available at the respiratory care program website http://web.arc.losrios.edu/edhealth/respcare.html. You can also reach program coordinator Lisa Viduya by email at viduyal@arc.losrios.edu.

Career Opportunities

The Bureau of Labor Statistics states that faster than average employment growth is projected for respiratory therapists. The increasing demand will come from substantial increases in the middle aged and elderly populations. Greater demand will also result from the expanding role of respiratory therapist in case management, disease prevention, emergency care, and the early detection of pulmonary disorders. Career opportunities include positions in hospitals and other areas, especially in home health care services, physician’s offices, medical equipment supply companies, to mention a few.

Successful completion of the respiratory care program qualifies the graduate for an Associate in Science degree and eligibility to apply for: (1) the examination for the respiratory care practitioner license issued by the California respiratory care Board, and (2) the national registry examination for advanced practitioner (registered respiratory therapist) which is administered by the National Board for respiratory care.

Enrollment Eligibility

To be eligible for enrollment in the program, the student must meet the following criteria:

• Graduation from an accredited high school (graduates from outside the United States must have transcripts evaluated by an independent agency), or successful completion of the General Educational Development (GED) Test or California High School Proficiency Examination (CHSPE) as defined by the current requirements of the State of California and National Board for Respiratory Care.
• BIOL 430 and BIOL 431 with grades of “C” or better.
• BIOL 440 with a grade of “C” or better.
• PHYS 310 with a grade of “C” or better.
• AH 110 with a grade of “C” or better.
• A GPA of 2.5 in all prerequisite courses.
• Current college GPA of 2.0 or better.
• A Curriculum Planning Summary Sheet completed by an ARC counselor and dated within the semester the enrollment packet is submitted.
• A completed pre-enrollment application.

Enrollment Process

Eligible students are selected for the program according to the following steps:

• Applications to the program may be obtained at the Health and Education Building, Room 770 or online at www.arc.losrios.edu/edhealth/respcare.html, and are due in the Health and Education office no later than 4:00 p.m. the second Friday in October.
• Selection is based on a computerized random selection process from among the qualified applicants.
• Only students who meet the pre-enrollment requirements and follow the pre-enrollment procedures will be considered for the program.
• The student accepted into the Respiratory Care program is required to have a physical examination, inoculations, clear drug screen, clear background check, and malpractice insurance.
RC 110  **Cardiopulmonary Pathologies for Respiratory Care**  3 Units  
**Pre-Requisites:** RC 111, 113, and 120  
Enrollment Limitation: Acceptance into the Respiratory Care Program.  
Placement through assessment process, or placement through assessment process.

This course introduces the common pathologies affecting the cardiopulmonary system and related pharmacological treatment. Topics include obstructive and restrictive airway disease, early childhood pulmonary disease, infectious pulmonary diseases, and pulmonary vascular diseases.

RC 111  **Applied Cardiopulmonary Anatomy & Physiology; Patient Assessment & Respiratory Care Equipment**  5 Units  
**Pre-Requisites:** RC 110, 113, and 120  
Enrollment Limitation: Acceptance into the Respiratory Care Program.  
Placement through assessment process.

This course introduces critical thinking skills necessary for clinical practice in respiratory care. It includes a comprehensive overview of the cardiopulmonary system with emphasis on applied physiology. Additionally, it covers ventilation, gas transport, gas exchange, and acid-base balance, including interpretation of data and the relationship of therapeutics to physiological principles. Respiratory care equipment and patient assessment skills are introduced. Field trips may be required.

RC 112  **Respiratory Care Pharmacology**  3 Units  
**Pre-Requisites:** RC 110, 111, and 113  
Enrollment Limitation: Acceptance into the Respiratory Care Program.  
Placement through assessment process, or placement through assessment process.

This course covers the concepts and principles of pharmacology required in the practice of respiratory care, including medications, actions, dosages, routes of administration, and adverse reactions. Topics include patient education of medication delivery devices, patient monitoring devices, utilization techniques, and the standards for therapeutic efficacy in relation to asthma, chronic obstructive pulmonary disease, and smoking cessation.

RC 113  **Respiratory Care Fundamentals Laboratory**  1 Unit  
**Pre-Requisites:** RC 110, 111, and 120  
Enrollment Limitation: Acceptance into the Respiratory Care Program.  
Hours: 54 hours LAB

This course is preparation for general practice as a respiratory care practitioner. It covers laboratory skills and procedures with emphasis on the application of theories and techniques related to assessment, evaluation, and interpretation of patients with cardiopulmonary illness. Included are concepts of Basic Life Support. Field trips may be required.

RC 120  **Orientation to Clinical Externships**  1 Unit  
**Pre-Requisites:** RC 110, 111, and 113  
Enrollment Limitation: Acceptance into the Respiratory Care Program.  
Hours: 18 hours LEC

This course is designed to prepare students for entry into clinical practice. It serves as a foundation for the development of critical thinking skills necessary for the clinical practice of respiratory care. Focusing on safe practice, topics included are, the Health Insurance Portability and Accountability Act (HIPAA), human rights and privacy, personal health and hygiene, and hospital orientations. Field trips may be required.

RC 121  **Concepts of Airway Care & Mechanical Ventilation**  4 Units  
**Pre-Requisites:** RC 110, 111, 113, and 120  
Enrollment Limitation: Acceptance into the Respiratory Care Program.  
Hours: 72 hours LEC

This course expands on the principles of respiratory failure, airway protective techniques, and advanced life support. Topics include mechanical ventilator theories and modes, invasive and noninvasive airway care, and Advanced Cardiac Life Support (ACLS) procedures.

RC 122  **Airway Care & Mechanical Ventilation Laboratory**  1 Unit  
**Pre-Requisites:** RC 110, 111, 113, and 120  
Enrollment Limitation: Acceptance into the Respiratory Care Program.  
Hours: 54 hours LAB

This course introduces higher levels of clinical practice including critical care. It covers advanced cardiac life support (ACLS), airway protective procedures, and mechanical ventilation. Field trips may be required.

RC 123  **Clinical Externship I**  3 Units  
**Pre-Requisites:** RC 110, 111, 113, and 120  
Enrollment Limitation: Meet the health requirements of the Los Rios Community College District for Allied Health Programs and certification in Basic Life Support for the Health Care Provider.  
Hours: 162 hours LAB
This is an introductory course in the clinical practice of respiratory care. The course presents the principles of medical gas delivery devices; humidity, aerosol and hyperinflation therapies and chest physiotherapy. It also covers the application, patient assessment, patient monitoring, and the evaluation of the efficacy of medical gas, humidity, aerosol, hyperinflation therapies, and chest physiotherapy. Field trips are required.

**RC 130  Respiratory Care in Neonatal and Pediatric Populations & Diagnostic Studies 4 Units**

Prerequisite: RC 112, 121, 122, and 123 with grades of “C” or better  
Corequisite: RC 131 and 132  
Hours: 72 hours LEC  
This is a preparation course for work in laboratories and special care areas of the hospital. Topics cover perinatal and pediatric diseases, labor and delivery, rehabilitation, and advanced diagnostic studies performed by respiratory therapist. Additional topics include bronchoscopy, advanced pulmonary function studies, bronchial provocation testing, polysonography, exercise stress tests, metabolic studies, hemodynamic measurements, and cardiovascular testing. Students must successfully complete the National Board for Respiratory Care Self Assessment Examination to receive a passing grade in this course. Students are responsible for fees associated with this examination.

**RC 131  Respiratory Care in Neonatal and Pediatric Populations & Diagnostic Studies Laboratory 1 Unit**

Prerequisite: RC 112, 121, 122, and 123 with grades of “C” or better  
Corequisite: RC 130 and 132  
Hours: 54 hours LAB  
This course is preparation for general practice as respiratory care practitioners. It provides laboratory practice in medical gas, humidity/aerosol, hyperinflation and bronchial hygiene therapies, airway management, and non-invasive and invasive mechanical ventilatory support as applied to neonatal and pediatric patients in specialized critical care units. Additionally, it covers pulmonary rehabilitation techniques, cardiopulmonary stress testing, sleep studies, and respiratory care techniques in the home setting. Field trips may be required. Students must successfully complete the National Board for Respiratory Care Self Assessment Examination to receive a passing grade in this course. Students are responsible for fees associated with this examination.

**RC 132  Clinical Externship II 6 Units**

Prerequisite: RC 112, 121, 122, and 123 with grades of “C” or better  
Corequisite: RC 130 and 131  
Enrollment Limitation: Meet the health requirements of the Los Rios Community College District for Allied Health Programs and certification in Pediatric Advanced Life Support and Neonatal Resuscitation Program.  
Hours: 324 hours LAB  
This is a preparatory course for advanced practice as respiratory care practitioners. Topics include clinical practice in the application of airway management, including intubation, suctioning, and bronchoscopy, to adult patients in critical care units. Additionally it includes clinical practice in application of non-invasive and invasive mechanical ventilatory support, ventilator settings/adjustments, monitoring, adjusting ventilators to improve oxygenation and/or ventilation and discontinuance from mechanical ventilatory support. Clinical experience is provided in regional hospitals and clinics. Field trips are required. Students must successfully complete the National Board for Respiratory Care Self Assessment Examination to receive a passing grade in this course. Students are responsible for fees associated with this examination.

**RC 140  Professional Development in Respiratory Care 2 Units**

Prerequisite: RC 130, 131, and 132 with grades of “C” or better  
Corequisite: RC 142  
Hours: 36 hours LEC  
This course prepares for transition into professional practice. Topics include ethical behaviors, resume writing, professional attributes and dress for the respiratory care setting. Interviewing skills, professional test preparation for state and national licensing examinations, practice examinations for the National Board of Respiratory Care's Written Registry and Clinical Simulation Self Assessment Examinations are also covered.

**RC 141  Techniques III - Neonatal/Pediatric and Cardiopulmonary Rehabilitation Techniques 1 Unit**

Prerequisite: RC 130 and 131 with grades of “C” or better.  
Corequisite: RC 140 and 142.  
Hours: 36 hours LEC  
This course provides in class laboratory practice in medical gas, humidity/aerosol, hyperinflation and bronchial hygiene therapies, airway management and non-invasive and invasive mechanical ventilatory support as applied to neonatal and pediatric patients in specialized critical care units. It also provides practice in pulmonary rehabilitation techniques, cardiopulmonary stress testing, sleep studies and respiratory care techniques in the home setting.

**RC 142  Clinical Externship III 7 Units**

Prerequisite: RC 130, 131, and 132 with grades of “C” or better  
Corequisite: RC 140  
Enrollment Limitation: Meet the health requirements of the Los Rios Community College District for Allied Health Programs and certification in Pediatric Advanced Life Support and Neonatal Resuscitation Program.  
Hours: 18 hours LEC; 324 hours LAB  
This course prepares for advanced practice of respiratory care. Topics include labor and delivery, neonatal intensive care, cardiac and medical intensive care, medical trauma management, application of pulmonary rehabilitation techniques, cardiopulmonary stress testing, sleep studies, and respiratory care techniques in the home setting. Additional topics include case studies in medical management. Field trips are required.