Respiratory Care Degree

Major Code: 011227A01

This degree is preparation for licensure as a Respiratory Care Practitioner in the state of California as a Respiratory Care Practitioner at the Advanced 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. All degree major courses require a grade of “C” or better to remain in the program.

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), P.O. Box 54876, Hurst, TX 76054-4876; (817) 283-2835. Further information regarding the respiratory care profession is available on the campus website: 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, and medical equipment supply companies.

Successful completion of the respiratory care program qualifies the graduate for an Associate in Science degree and eligibility to apply for: (1) licensure as a Respiratory Care Practitioner through the Respiratory Care Board of CA, and (2) the national credentialing examination for advanced practitioner (Registered Respiratory Therapist) which is administered by the National Board for Respiratory Care (NBRC).

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.
• A GPA of 2.5 in all prerequisite courses.
• AH 110 with a grade of “C” or better.
• BIOL 430 and BIOL 431 with grades of “C” or better.
• BIOL 440 or BIOL 442 with a grade of “C” or better.
• PHYS 310 or PHYS 350 with a grade of “C” or better.
• Current college GPA of 2.0 or better.
• A Curriculum Planning Summary Sheet completed by an ARC counselor and dated within the year the enrollment application 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 on the college website: arc.losrios.edu and are due in the Health and Education office no later than 3:00 p.m. the second Friday in October.
• Only students who meet the pre-enrollment requirements and follow the pre-enrollment procedures will be considered for the program.
• Selection is based on a computerized random selection process from among the qualified applicants.
• The student accepted into the Respiratory Care program is required to have a physical examination, inoculations, drug screen, background check, and malpractice insurance. The student is responsible for any cost incurred related to meeting the requirements.

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## RESPIRATORY CARE

### Requirements for Degree 66-68 Units

#### Pre-RC Semesters:
- **AH 110** Medical Language for Health-Care Providers ........................................... 3
- **Biol 430** Anatomy and Physiology .......................................................................... 5
- **Biol 431** Anatomy and Physiology .......................................................................... 5
- **Biol 440** General Microbiology (4) ...................................................................... 4-5
- or **Biol 442** General Microbiology and Public Health (5)
- **Phys 310** Conceptual Physics (3) ........................................................................ 3-4
- or **Phys 350** General Physics (4)

#### 1st Semester:
- **RC 110** Cardiopulmonary Pathologies for Respiratory Care .............................. 3
- **RC 111** Principles of Respiratory Care ................................................................... 8

#### 2nd Semester:
- **RC 121** Concepts of Airway Care & Mechanical Ventilation .............................. 4
- **RC 122** Airway Care & Mechanical Ventilation Laboratory .............................. 1
- **RC 123** Clinical Externship I .................................................................................. 3
- **RC 124** Respiratory Care Pharmacology .............................................................. 3

#### 3rd Semester:
- **RC 130** Respiratory Care in Neonatal and Pediatric Populations & Diagnostic Studies .......................................................... 3
- **RC 131** Respiratory Care in Neonatal and Pediatric Populations & Diagnostic Studies Laboratory ................................................. 1
- **RC 132** Clinical Externship II .................................................................................. 6

#### 4th Semester:
- **RC 140** Professional Development in Respiratory Care ................................... 2
- **RC 142** Clinical Externship III ................................................................................ 6

#### Any Semester:
- A minimum of 3 units from the following: ...................................................................... 3
  - **Engwr 300** College Composition (3)
  - **Engwr 480** Honors College Composition (3)
  - **Eslw 340** Advanced Composition (4)
- A minimum of 3 units from the following: ...................................................................... 3
  - **Anth 310** Cultural Anthropology (3)
  - **Anth 481** Honors Cultural Anthropology (3)
  - **Psyc 300** General Principles (3)
  - **Psyc 320** Social Psychology (3)
  - **Psyc 390** Psychology of Death and Dying (3)
  - **Psyc 480** Honors General Principles (3)

#### Associate Degree Requirements:
The Respiratory Care Associate in Science (A.S.) Degree may be obtained by completion of the required program, plus general education requirements, plus sufficient electives to meet a 60-unit total. See ARC graduation requirements.

### Respiratory Care

#### RC 110  Cardiopulmonary Pathologies for Respiratory Care  3 Units
Corequisite: RC 111
Advisory: Eligible for ENGRD 310 or ENGRD 312 AND ENGWR 300; OR ESLR 340 AND ESLW 340.
Enrollment Limitation: Acceptance into the Respiratory Care Program. Hours: 54 hours LEC

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

#### RC 111  Principles of Respiratory Care  8 Units
Corequisite: RC 110
Advisory: Eligible for ENGRD 310 or ENGRD 312 AND ENGWR 300; OR ESLR 340 AND ESLW 340.
Enrollment Limitation: Acceptance into the Respiratory Care Program. Hours: 126 hours LEC; 54 hours LAB

This course introduces critical thinking skills necessary for entry into 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, patient assessment skills, safe practices, such as the Health Insurance Portability and Accountability Act (HIPAA), human rights and privacy, personal health and hygiene, and hospital orientations are introduced. 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 121  Concepts of Airway Care & Mechanical Ventilation  4 Units
Prerequisite: RC 110 and 111 with grades of “C” or better
Corequisite: RC 122, 123, and 124
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
Prerequisite: RC 110 and 111 with grades of “C” or better
Corequisite: RC 121, 123, and 124
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
Prerequisite: RC 110 and 111 with grades of “C” or better
Corequisite: RC 121, 122, and 124
Enrollment Limitation: Students must 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 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 evaluation of the efficacy of medical gas, humidity, aerosol and hyperinflation therapies, and chest physiotherapy. A portion of this course may be offered with a TBA component which may include working in clinical sites.

RC 124 Respiratory Care Pharmacology 3 Units
Prerequisite: RC 110 and 111 with grades of “C” or better
Corequisite: RC 121, 122, and 123
Hours: 54 hours LEC
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 130 Respiratory Care in Neonatal and Pediatric Populations & Diagnostic Studies 3 Units
Prerequisite: RC 121, 122, 123, and 124 with grades of “C” or better
Corequisite: RC 131 and 132
Hours: 54 hours LEC
This course prepares students to work in laboratories and special care areas of a hospital. Topics include perinatal and pediatric diseases, labor and delivery, rehabilitation, and advanced diagnostic studies performed by respiratory therapists. Additional topics include bronchoscopy, advanced pulmonary function studies, bronchial provocation testing, polysomnography, exercise stress tests, metabolic studies, hemodynamic measurements, advanced modalities of mechanical ventilation, and cardiovascular testing.

RC 131 Respiratory Care in Neonatal and Pediatric Populations & Diagnostic Studies Laboratory 1 Unit
Prerequisite: RC 121, 122, 123, and 124 with grades of “C” or better
Corequisite: RC 130 and 132
Hours: 54 hours LAB
This course prepares students 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 Examinations 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 121, 122, 123, and 124 with grades of “C” or better
Corequisite: RC 130 and 131
Enrollment Limitation: Students must meet the health requirements of the Los Rios Community College District for Allied Health Programs and certification in Advanced Cardiac Life Support.
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. A portion of this course may be offered with a TBA component which may include working in clinical sites.

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 students for transition into professional practice. Topics include ethical behaviors, resume writing, and professional attributes and dress for the respiratory care setting. Interviewing skills, professional test preparation for state and national licensing examinations, and practice examinations for the National Board of Respiratory Care’s Therapist Multiple-Choice Examination and Clinical Simulation Self Assessment Examinations are also covered.

RC 142 Clinical Externship III 6 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: 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.