

Area: Health and Education
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Degree: A.S. - Respiratory Care

http://www.arc.losrios.edu/Programs_of_Study/Health_and_Education/Respiratory_Care.htm

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), 1248 Harwood Rd., Bedford, TX 76021; (817) 283-2835. Further information regarding the respiratory care profession is available at the respiratory care program website:

www.arc.losrios.edu/Programs_of_Study/Health_and_Education/Respiratory_Care.htm

You can also reach program coordinator Lisa Hunsaker Ilaga by email at: IlagaL@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) 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.
- 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 online at http://www.arc.losrios.edu/Programs_of_Study/Health_and_Education/Respiratory_Care.htm and are due in the Health and Education office no later than 4:00 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.

Requirements for Degree **68-69 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.....	7

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.....	4
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 ENGRD 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 7 Units

Corequisite: RC 110

Advisory: Eligible for ENGRD 310 or ENGRD 312 AND ENGRD 300; OR ESLR 340 AND ESLW 340.

Enrollment Limitation: Acceptance into the Respiratory Care Program.

Hours: 108 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 4 Units*Prerequisite:* RC 121, 122, 123, and 124 with grades of "C" or better*Corequisite:* RC 131 and 132

Hours: 72 hours LEC

This course prepares students to work in laboratories and special care areas of a hospital. Topics cover 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, polysonography, exercise stress tests, metabolic studies, hemodynamic measurements, 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:* Student 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.