

Respiratory Care Technology (RC)

Respiratory Care Technology (RC)

Cincinnati State offers a comprehensive program in Respiratory Care Technology.

Students develop a wide range of clinical skills in traditional and nontraditional roles and gain proficiency in all areas of respiratory care, such as bedside pulmonary care, life-support systems management, diagnostic testing, pulmonary rehabilitation, and long-term care. Students practice these skills with a variety of health care professionals in the diagnosis, treatment, and education of the patient.

Program graduates earn an Associate of Applied Science degree and are eligible to take the National Board for Respiratory Care exam required to earn the Registered Respiratory Therapist (RRT) credential.

The Respiratory Care Technology program is accredited by The Commission on Accreditation for Respiratory Care (CoARC), 1248 Harwood Road, Bedford, Texas, 76021. Phone: (817) 282-2835. Website: www.coarc.com (<http://www.coarc.com>). Program #: 200260

For more information, please contact the Health and Public Safety Division at (513) 569-1670.

To apply for this program at Cincinnati State, visit the Admissions (<http://www.cincinnati.edu/academics/admission/>) section of the College website.

Respiratory Care Technology (RC)

Prior to applying for selective enrollment into the Respiratory Care program, applicants must meet these requirements: completed high school or college biology, chemistry and physics within the last 6 years with a C or better; 2.75 overall GPA for at least 12 credit hours earned from the most recent qualifying institution; and eligible to take MAT 131 and ENG 101.

| Semester 1 | | Lec | Lat | Credits |
|------------|--|-----|-----|---------|
| FYE 1XX | First Year Experience Elective (B) | 1 | 0 | 1 |
| BIO 151 | Anatomy and Physiology 1 (G) | 3 | 2 | 4 |
| ENG 101 | English Composition 1 (G) | 3 | 0 | 3 |
| RT 100 | Introduction to Respiratory Care (B) | 1 | 0 | 1 |
| RT 101 | Respiratory Care Science 1 (T) | 3 | 2 | 4 |
| RT 172 | Cardiopulmonary Anatomy and Physiology (B) | 3 | 2 | 4 |
| Semester 2 | | | | |
| RT 102 | Respiratory Care Science 2 (T) | 3 | 2 | 4 |
| BIO 152 | Anatomy and Physiology 2 (B) | 3 | 2 | 4 |
| BIO 220 | Microbiology (B) | 2 | 3 | 3 |
| RT 173 | Cardiopulmonary Disease (T) | 3 | 2 | 4 |

| RT 111 | Respiratory Care Clinical Practice 1 (T) | 1 | 8 | 2 |
|----------------|--|----|----|----|
| Semester 3 | | | | |
| RT 112 | Respiratory Care Clinical Practice 2 (T) | 1 | 16 | 2 |
| RT 103 | Mechanical Ventilation (T) | 3 | 2 | 4 |
| MAT 131 | Statistics 1 (G) | 2 | 2 | 3 |
| ENG 102 | English Composition 2: Contemporary Issues (G) | 3 | 0 | 3 |
| Semester 4 | | | | |
| BIO 240 | Pathophysiology (B) | 3 | 0 | 3 |
| RT 211 | Respiratory Clinical Practice 3 (T) | 1 | 16 | 2 |
| RT 201 | Advanced Respiratory Critical Care (T) | 3 | 0 | 3 |
| RT 202 | Specialties in Respiratory Care (T) | 2 | 0 | 2 |
| Semester 5 | | | | |
| RT 203 | Respiratory Care Seminar (T) | 1 | 2 | 2 |
| RT 204 | Respiratory Care Capstone (T) | 0 | 2 | 1 |
| RT 212 | Respiratory Clinical Practice 4 (T) | 1 | 16 | 2 |
| PSY 110 | Introduction to Psychology (G) | 3 | 0 | 3 |
| Total Credits: | | 49 | 79 | 64 |

Electives

| First Year Experience Elective | | 1 |
|--------------------------------|------------------------------|---|
| FYE 100 | College Survival Skills | 1 |
| FYE 105 | College Success Strategies | 2 |
| FYE 110 | Community College Experience | 3 |

Some courses are offered in alternative versions identified with a letter after the course number-- for example, ENG 101 and ENG 101A.

- This curriculum displays only course numbers without the added letter.
- The alternative version, when available, meets the requirements of the course version without the added letter.

The letters G, B, and T (displayed after course titles or elective descriptions) identify types of courses required by the Ohio Department of Higher Education as part of an associate's degree curriculum.

G = General Education course in this curriculum

B = Basic Skills course in this curriculum

T = Technical course in this curriculum

Respiratory Care Technology (RC)

- Evaluate data in the patient record
- Gather clinical information
- Perform procedures to gather clinical information
- Evaluate procedure results
- Recommend diagnostic procedures

- Assemble and troubleshoot equipment
- Ensure infection control
- Perform quality control procedures
- Maintain a patent airway
- Perform airway clearance and lung expansion therapies
- Support oxygenation and ventilation
- Administer medications and specialty gases
- Ensure modifications are made to the respiratory care plan
- Utilize evidence-based medicine principles
- Perform respiratory care in high-risk situations
- Assist a physician in performing procedures
- Initiate and conduct patient/family education

Faculty

Program Chair and Director of Clinical Education

Michael Chaney, MEd, RRT
michael.chaney2@cincinnatiastate.edu

Medical Director

Dr. Christopher Schmitt, MD

Advisor

Debra Lierl, M.Ed., RRT
debra.lierl@cincinnatiastate.edu

Other Full-time Faculty

Julie Klensch, BS, RRT
julie.klensch@cincinnatiastate.edu

Interim Director of Clinical Education

Mike Mullarkey, BAS

Courses

RT 100 Introduction to Respiratory Care 1 Credit. 1 Lecture Hour. 0 Lab Hour.

A course on fundamental concepts in the field of Respiratory Care. Topics include: history of respiratory care, time management, communication, team building, diversity, patient rights and confidentiality, professional ethics, and death and dying. Prerequisites: Respiratory Care Program Chair consent
Instructor Consent Required

RT 101 Respiratory Care Science 1 4 Credits. 3 Lecture Hours. 2 Lab Hours.

A course on fundamentals of pulmonary patient care. Topics include: patient assessment, moving, and positioning; oxygen therapy; humidity and aerosol therapies; hospital safety; infection control; respiratory pharmacology; and medical ethics.

Prerequisites: PHY 110 or high school physics within the past 6 years (minimum grade C), and Respiratory Care Technology Program Chair consent

Instructor Consent Required

RT 102 Respiratory Care Science 2 4 Credits. 3 Lecture Hours. 2 Lab Hours.

A continuation of RT 101. Topics include: artificial airways, airway suctioning, cleaning and sterilizing equipment, expansion therapy, bronchial hygiene therapies, pulmonary imaging, intubation, non-invasive ventilation, newborn development, and newborn congenital diseases and conditions.

Prerequisites: RT 100 and RT 101 and RT 172 (minimum grade C for all)

RT 103 Mechanical Ventilation 4 Credits. 3 Lecture Hours. 2 Lab Hours.

A course on infant and adult mechanical ventilation. Topics include: indications, assessment, application, monitoring, weaning, and modes of mechanical ventilation.

Prerequisites: RT 102 and RT 111 and RT 173 (minimum grade C for all)

RT 111 Respiratory Care Clinical Practice 1 2 Credits. 1 Lecture Hour. 8 Lab Hours.

Students practice using respiratory care skills for basic floor therapy in the hospital environment. Topics include: medications administration, oxygen therapy, bronchial hygiene, expansion therapy, and humidification.

Prerequisites: RT 100 and RT 101 and RT 172 (minimum grade C for all)

RT 112 Respiratory Care Clinical Practice 2 2 Credits. 1 Lecture Hour. 16 Lab Hours.

A continuation of RT 111. Students practice respiratory care skills and responsibilities in a hospital setting. Topics include: critical care and mechanical ventilation, pulmonary functions, operating room observation, and hyperbaric oxygen.

Prerequisites: RT 102 and RT 111 and RT 173 (minimum grade C for all)

RT 172 Cardiopulmonary Anatomy and Physiology 4 Credits. 3 Lecture Hours. 2 Lab Hours.

A course on the anatomy and physiology of the respiratory and circulatory systems. Topics include: ventilation, diffusion, O₂ and CO₂ transport, acid/base balance, circulation, ventilation/perfusion (VQ) relationships, compliance, resistance, deadspace, and basic ECG interpretation

Prerequisites: Respiratory Care Program Chair consent
Instructor Consent Required

RT 173 Cardiopulmonary Disease**4 Credits. 3 Lecture Hours. 2 Lab Hours.**

A course on cardiopulmonary diseases and the diagnosis, treatment, and prognosis of each disease. Topics include: pulmonary diseases and conditions, pulmonary function testing and interpretation, and use of testing in diagnosing pulmonary diseases.

Prerequisites: RT 100 and RT 101 and RT 172 (minimum grade C for all)

RT 201 Advanced Respiratory Critical Care**3 Credits. 3 Lecture Hours. 0 Lab Hour.**

A course on caring for the critically ill respiratory care patient. Topics include: critical care assessment, medications, hemodynamic monitoring, and critical diseases and conditions.

Prerequisites: RT 103 and RT 112 (minimum grade C for both)

RT 202 Specialties in Respiratory Care**2 Credits. 2 Lecture Hours. 0 Lab Hour.**

A course on specialized areas of respiratory care and emerging roles for the respiratory therapist. Topics include: bronchoscopy, tracheostomy, burn care, chest tubes, metabolic testing, exercise testing, pulmonary rehabilitation, capnography, and other specialty areas.

Prerequisites: RT 103 and RT 112 (minimum grade C for both)

RT 203 Respiratory Care Seminar**2 Credits. 1 Lecture Hour. 2 Lab Hours.**

Students review theory and practice in respiratory care to prepare for national certification examinations. Topics include: Advanced Cardiovascular Life Support (ACLS), starting intravenous therapy (IVs), and transitioning from student to professional.

Prerequisites: RT 201 and RT 202 and RT 211 (minimum grade C for all)

RT 204 Respiratory Care Capstone**1 Credit. 0 Lecture Hour. 2 Lab Hours.**

Students complete a research project in an approved specialty area in the field of respiratory care.

Prerequisites: RT 201 and RT 202 and RT 211 (minimum grade C for all)

RT 211 Respiratory Clinical Practice 3**2 Credits. 1 Lecture Hour. 16 Lab Hours.**

A continuation of RT 112. Students practice skills and responsibilities for care of ventilator patients in the intensive care unit of a hospital.

Topics include: mechanical ventilation, respiratory equipment, home care, neonatal and pediatrics care, and pulmonary rehabilitation.

Prerequisites: RT 103 and RT 112 (minimum grade C for both)

RT 212 Respiratory Clinical Practice 4**2 Credits. 1 Lecture Hour. 16 Lab Hours.**

A continuation of RT 211. Students complete an internship and practice respiratory care skills and responsibilities in multiple healthcare settings. Clinical rotations include: ECG and vascular testing, burn care, extended care facilities, and critical care.

Prerequisites: RT 201 and RT 202 and RT 211 (minimum grade C for all)