Respiratory Therapy

Taylor Health Science Building, 2nd Floor
1526 South Medical Center Drive
St. George, UT 84790
435-879-4961
https://health.dixie.edu/respiratory-therapy/

To find faculty and staff phone numbers and email addresses, please consult the University Directory (http://www.dixie.edu/directory/directory.php).

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Program Description
Respiratory therapists, also known as respiratory care practitioners, provide treatment, evaluation, monitoring and management of patients with breathing disorders or cardiovascular problems. Care provided by respiratory therapists may include administration of oxygen, cardiopulmonary resuscitation, management of mechanical ventilators, administering drugs to the lungs, monitoring cardiopulmonary systems and measuring lung function. Respiratory therapists treat all types of patients, ranging from premature infants whose lungs are not fully developed to elderly people with lung disease.

Accreditation
The Respiratory Therapy program at Dixie State University of Utah has full accreditation from the Committee on Accreditation for Respiratory Care (CoARC). This accreditation status guarantees our graduates will be eligible to sit their national credentialing examinations (these examinations are recognized as part of the licensure criteria in the U.S. and Canada). Contact at the Committee on Accreditation for Respiratory Care at:

CoARC
1248 Harwood Road
Bedford, TX 76021-4244
Phone: 435-354-8519
www.coarc.com (http://www.coarc.com)

Course Prefixes
• RESP

Degrees
• Associate of Applied Science in Respiratory Therapy (catalog.dixie.edu/programs/respiratorytherapy/associate_of_applied_science_in_respiratory_therapy)

Program Admission
To be considered for admission to the Respiratory Therapy program, an applicant must first be accepted as a Dixie State University student. Then, the applicant must complete a separate application to the Respiratory Therapy program.

Application deadline is May 1st. Applications are available from the Respiratory Therapy program website at: https://health.dixie.edu/respiratory-therapy/program-admissions/.
Admission to the Respiratory Therapy program is based upon academic performance in both general education and specific program prerequisite courses in addition to other selection criteria, including:

1. Submission of a complete Program Application
2. Minimum cumulative GPA of 2.25 or higher
3. Completion with a “C” or better of specified program prerequisite courses
4. Individual interview with the Respiratory Therapy Program Selection Committee

Additional factors that will be taken into consideration for program admission include previous health care experience and weighted GPA in specific prerequisite courses. A criminal background check and selected immunizations will be required upon acceptance to the program.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 2420 &amp; BIOL 2425</td>
<td>Human Physiology and Human Physiology Lab</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1010 or ENGL 1010D</td>
<td>Introduction to Writing (EN)</td>
<td>3</td>
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<tr>
<td>ENGL 2010</td>
<td>Interm Writing Selected Topics: (EN)</td>
<td>3</td>
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<tr>
<td>MATH 1040 or MATH 1030 or MATH 1050</td>
<td>Introduction to Statistics (MA) (preferred) Quantitative Reasoning (MA) College Algebra / Pre-Calculus (MA)</td>
<td>3-4</td>
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<tr>
<td>CHEM 1010 or CHEM 1110</td>
<td>Introduction to Chemistry (PS) ¹</td>
<td>3-4</td>
</tr>
<tr>
<td>PSY 1010 or PSY 1100 or FSHD 1500 or SOC 1010 or SOC 1020 or SOC 1200</td>
<td>General Psychology (SS, GC) Human Development Through Lifespan (SS, GC) Human Development Lifespan (SS, GC) Introduction to Sociology (SS, GC) Social Problems (SS, GC) Sociology of the Family (SS, GC)</td>
<td>3</td>
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¹ Chemistry labs (CHEM 1015 or CHEM 1115) are recommended, but not required for program admission.

Students must complete specified prerequisite courses prior to admission to the Respiratory Therapy Program. Respiratory Therapy Program courses include 59 semester hours that must be completed sequentially. Students will be eligible for employment after graduation and meeting licensure requirements.

**Career Information**

Respiratory therapists care for patients who have trouble breathing—for example, from a chronic respiratory disease, such as asthma or emphysema. Their patients range from premature infants with undeveloped lungs to elderly patients who have diseased lungs. They also provide emergency care to patients suffering from heart attacks, drowning, or shock.

**Job Outlook**

Employment of respiratory therapists is projected to grow 23 percent from 2016 to 2026, much faster than the average for all occupations. Growth in the middle-aged and elderly population will lead to an increased incidence of respiratory conditions such as chronic obstructive pulmonary disease (COPD) and pneumonia. These respiratory disorders can permanently damage the lungs or restrict lung function.

**Salary Range**

The median annual wage for respiratory therapists was $58,670 in May 2016. The lowest 10 percent earned less than $42,490, and the highest 10 percent earned more than $81,550.

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Courses

RESP 1010. Introduction to Respiratory Therapy and Medical Terminology. 2 Hours.
First semester course. Introduces respiratory care profession, including professional organizations, credentialing, and licensing agencies. Also provides an overview of medical ethics, medicolegal issues of health care, regulations such as HIPPA, and selected OSHA standards, as well as an introduction to medical terminology and patient-care documentation. FA.

RESP 2020. Cardiopulmonary Anatomy and Physiology. 3 Hours.
First semester course. Expands on basic human anatomy and physiology, concentrating on the cardiopulmonary system. Covers selected gas laws and physical principles associated with respiration and gas exchange, ventilation, pulmonary mechanics, circulation, and hemodynamics. Introduces fetal and newborn anatomy and physiology and basic cardiac and renal function. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 2030. Introduction to Pathophysiology. 3 Hours.
First semester course. Introduction to human diseases, injuries, conditions, and disorders. Review of the hematologic, gastrointestinal, musculoskeletal, integumentary, endocrine, urinary, neurological, cardiac, and pulmonary systems, including fluid and electrolyte and acid-base balance. Integration of general pathologies as they relate to the scope of respiratory therapy practice. Pathologies associated with genetic traits or abnormalities and carcinogenesis are also covered, as are specific clinical application of respiratory care diagnostics. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 2040. Respiratory Care Therapeutics I. 3 Hours.
First semester course. Theory and clinical applications of a wide range of respiratory therapy modalities, including medical gases (including cylinders, regulators, flowmetering devices, and liquid oxygen), aerosols, humidity, hyperinflation techniques, chest physiotherapy, and airway clearance techniques. Clinical Practice Guidelines [CPGs] are introduced, and students must master clinical indications, contraindications, side-effects, and desired therapeutic outcomes. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 2041. Laboratory Practice/Therapeutics I. 2 Hours.
First semester course. Introduction to patient care, including body mechanics, patient interactions, and documentation. Practice in the selection, use, and trouble-shooting of equipment associated with providing medical gases, aerosol and humidity, hyperinflation techniques, IPPB, and airway clearance. Introduction to respiratory pharmacology and devices used to administer and monitor aerosolized medications. Lab fee required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 2050. Introduction to Respiratory Care Pharmacology. 3 Hours.
Second semester course. Introduction to principles of pharmacology associated with treatment of infectious diseases and disorders of the hematologic, cardiovascular, pulmonary, endocrine, renal, GI, and neurologic systems, including administration routes and dosage calculation of selected medications. Sedation management, anesthesia, analgesia, chemotherapeutic agents, specific application of principles associated with aerosolized medications, and topical absorption are also included. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

RESP 2060. Patient Assessment. 2 Hours.
Second semester course. Introduction to basic patient assessment techniques, including physical assessment and integration of laboratory and diagnostic findings associated with specific diagnoses. Covers physical findings; radiologic findings and other imaging studies; laboratory tests such electrolytes, bacteriology, hematology, and metabolic studies; acid-base balance and blood gas analysis; basic pulmonary function; and hemodynamic values. Emphasis is on the integration of patient presentation and associated pathology. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

RESP 2065. Cardiopulmonary Pathophysiology. 3 Hours.
Second semester course. Expands on RESP 2030 with an emphasis on cardiopulmonary and renal injuries, diseases, disorders, and conditions, using a case-based method that integrates the etiology, presentation, pathophysiology, diagnosis, treatment, and prognosis of cardiopulmonary, hemodynamic, and renal dysfunction. Also explores neonatal and pediatric pathologies of the renal and cardiopulmonary systems, including congenital and structural defects. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

RESP 2070. Respiratory Care Therapeutics II. 3 Hours.
Second semester course. Provides theory and clinical applications of respiratory therapy modalities, including airway management (intubation, extubation, tracheostomy care); manual ventilation; introduction to concepts of artificial ventilation (CPAP, BIPAP, positive and negative pressure ventilators); blood gas sampling, analysis, and quality control; noninvasive monitoring (oximetry, capnography, pulmonary mechanics); and equipment decontamination. Associated CPGs are introduced. Mastery of the clinical indications, contraindications, side-effects, and desired outcomes of therapies is required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

RESP 2071. Laboratory Practice/Therapeutics II. 2 Hours.
Laboratory portion of RESP 2070. Requires students to master artificial airway management skills including endotracheal intubation and bag-valve-mask ventilation. Also provides practice in blood gas sampling, noninvasive monitoring, basic ventilatory support, basic pulmonary function assessments and bedside spirometry. Lab fee required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.
RESP 2100. Clinical Practice I. 5 Hours.
Second semester course. Introduction to the hospital setting in order to practice clinical application of all skills mastered in RESP 2041 and RESP 2071 while developing interaction skills with patients and other members of the health care team. Proficiency must be demonstrated in providing therapies, monitoring and documenting care, and prioritizing to develop time management skills, while students participate in clinical care conferences and in evaluation of the appropriateness of care with respect to CPGs. 225 clinical hours. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 2200. Cardiopulmonary Diagnostics. 3 Hours.
Third semester course. In-depth review of pulmonary function studies such as spirometry, lung volumes and diffusing capacities, bronchial provocation testing, and bronchodilator response studies as well as blood gas analysis and interpretation of arterial, capillary, and mixed venous blood gases, with an emphasis on case-based learning and application of diagnostic findings to initiating or modifying patient care. Introduction of cardiac assessments and interventions (EKGs, echocardiography, IABP support, and hemodynamics including Swann-Ganz and arterial catheters). Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

RESP 2300. Introduction to Mechanical Ventilation. 3 Hours.
Third semester course. Theory and clinical indications of all modes of ventilatory support, emphasizing mastery of understanding the indications for initiation and continuation of ventilatory support, assessing and monitoring patients on life-support, integrating patient response to therapy with recommendations for modifying ventilator support, and determining the appropriate time and method for weaning from mechanical ventilation. Includes application of CPAP, BiPAP, negative pressure ventilation, and positive pressure ventilation, and introduces ventilators used in extended care or home care. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

RESP 2301. Laboratory/Adult Mechanical Ventilation. 2 Hours.
Lab portion of RESP 2300. Case-based practice in selecting appropriate mode of mechanical ventilation from a wide range of ventilation modes based on patient situations; then initiating, monitoring, assessing, and recommending changes to ventilatory support; and weaning from mechanical ventilation. A wide range of ventilation modes and applications is mastered through a case-based format. Lab fee required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

RESP 2310. Clinical Practice II. 5 Hours.
Third semester course. Clinical experience course emphasizing the provision of mechanical ventilation and assessment of patients in the emergency and intensive care settings. 225 clinical hours. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

RESP 2400. Alternative Site and Subacute Respiratory Care. 1 Hour.
Fourth semester course. Introduces practice of respiratory care in a home care/DME setting, pulmonary rehabilitation, patient education, smoking cessation, asthma management, and sleep disorders including sleep apnea. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 3005. Critical Care/ACLS. 3 Hours.
Third semester course. Expands basic skills acquired in previous respiratory therapy courses and focuses on the presentation and management of patients in the ICU and emergency settings, emphasizing patient assessment and procedures involved in resuscitation including current practices in advanced life support. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

RESP 3020. Neonatal/Pediatric Respiratory Care. 2 Hours.
Fourth semester course. Introduces theory and practice of pediatric and neonatal respiratory care, including specific anatomy, physiology and pathophysiology associated with neonates and children. Includes assessment, management, ventilatory techniques and equipment specific to infants and children as well as pharmacology, with medications and dosages specific to infants and children, and ventilatory modes such as HFJV and oscillation ventilation. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 3021. Laboratory Practice/Neonatal Care. 2 Hours.
Fourth semester course. Laboratory practice of techniques associated with airway management, ventilatory support, and resuscitation of infants and children. Case-based learning emphasizes patient assessment and initiation of appropriate respiratory support for infants and children. Lab fee required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 3100. Clinical Practice III. 5 Hours.
Fourth semester course. Capstone clinical practice course includes experience in neonatal intensive care as well as demonstrating continuing competency in adult intensive care, emergency care, and general respiratory care. Clinical rotations include experience in the home care setting and sleep laboratory. 300 clinical hours. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

RESP 3150. Critical Thinking Seminar/NBRC Review. 2 Hours.
Fourth semester course. Comprehensive curriculum review based on NRBC credentialing exams. Case-based clinical simulations require students to integrate all concepts learned throughout the curriculum and clinical practice courses and apply this knowledge to branching-logic scenarios. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.