

# Respiratory Care

Respiratory Care (RC) is an allied health profession that involves the evaluation, treatment, and education of patients with cardiopulmonary (heart-lung) disorders. Respiratory therapists (RTs) work closely with patients, physicians, nurses, and other health care professionals in critical care, emergency rooms, newborn nurseries and pediatrics, medical units, and home care. RTs perform diagnostic tests that assist a physician to diagnose and monitor lung disease, administer a variety of treatments to alleviate a patient's breathing problems, manage mechanical ventilators and life support equipment, direct pulmonary rehabilitation activities, and educate patients and their families about their disease process, therapy and wellness.

A Bachelor of Science degree, Respiratory Care major, includes two to three years of academic courses on campus and a 15-month full-time professional-level internship in the Respiratory Care Department at Sanford Health, Fargo, ND, where students' class and clinical education is specifically applied to the practice of respiratory care. The NDSU/Sanford Respiratory Care Program is accredited by the Commission on Accreditation for Respiratory Care (CoArc). Graduates are eligible to write the national certifying examinations leading to the registered respiratory therapist (RRT) credential. NDSU graduates have enjoyed excellent employment opportunities and pass rates on the certifying exams.

Academic courses include chemistry, physics, anatomy and physiology, microbiology, college algebra, psychology, and computer science, in addition to general education courses. The full-time professional internship at Sanford consists of lecture, laboratory, and clinical education that prepares the student to enter the profession of respiratory care. Near the end of the professional program, students choose a specialty area of practice for a focused clinical experience. Common specialties include neonatal/pediatric general or intensive care, adult general or intensive care, diagnostics, pulmonary rehabilitation, home care, education, and management (RC 494 Individual Study).

Qualified students apply for the professional internship during the spring of the academic year they will complete all prerequisite college courses. The application deadline is March 1 annually. Admission is selective and based upon successful completion of all prerequisite courses with a minimum grade of C, cumulative and "core" course grade point average (a minimum of 2.50 is required; a maximum of core course attempts is two), references, related experience, interview, and ability to meet program-designated technical standards. Students must also comply with criminal background and student conduct requirements.

Information about the profession, curriculum, internship, and advising contacts are available from the Department of Allied Sciences (<https://www.ndsu.edu/alliedsciences>). It is highly recommended that students interested in RC meet with the RC advisor to discuss degree/major requirements, internship admission and create a plan of study at least one year prior to anticipated internship application.

## Major Requirements

### Respiratory Care Major

**Degree Type:** B.S.

**Required Degree Credits to Graduate:** 128

### General Education Requirements for Baccalaureate Degree

- A list of approved general education courses is available here (<http://bulletin.ndsu.edu/past-bulletin-archive/2017-18/academic-policies/undergraduate-policies/general-education/#genedcoursestext>).
- General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review the major, minor, and program emphases requirements for minimum grade restrictions, should they apply.

Code	Title	Credits
<b>Communication (C)</b>		12
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing <sup>†</sup>		
<b>Quantitative Reasoning (R) <sup>†</sup></b>		3
<b>Science and Technology (S) <sup>†</sup></b>		10
<b>Humanities and Fine Arts (A) <sup>†</sup></b>		6
<b>Social and Behavioral Sciences (B) <sup>†</sup></b>		6
<b>Wellness (W) <sup>†</sup></b>		2
<b>Cultural Diversity (D) <sup>*†</sup></b>		
<b>Global Perspectives (G) <sup>*†</sup></b>		
Total Credits		39

\* May be satisfied by completing courses in another General Education category.

† May be satisfied with courses required in the major. Review major requirements to determine if a specific upper division writing course is required.

## Major Requirements

Code	Title	Credits
<b>Respiratory Care Major Requirements</b>		
CHP 190	Critical Thinking and Academic Success	2
RC 200	Introduction to Respiratory Care	1
RC 496	Field Experience	51
RC 494	Individual Study	4
Advanced clinicals including the capstone experience.		
<b>Related Courses Required:</b>		
BIOC 260 or BIOC 460	Elements of Biochemistry Foundations of Biochemistry and Molecular Biology I	3 or 4
BIOL 220 & 220L	Human Anatomy and Physiology I and Human Anatomy and Physiology I Laboratory (May satisfy a general education category S)	4
BIOL 221 & 221L	Human Anatomy and Physiology II and Human Anatomy and Physiology II Laboratory	4
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	4
CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory	4
CHEM 240	Survey of Organic Chemistry	3
CHP 125	Medical Terminology for Health Professionals	1
CSCI 114 or CSCI 116	Microcomputer Packages (May satisfy a general education category S) Business Use of Computers	3
MATH 103	College Algebra (or higher level; excluding MATH 104)	3
PHYS 120	Fundamentals of Physics (May satisfy a general education category S)	3
PSYC 111	Introduction to Psychology (May satisfy a general education category B)	3
STAT 330	Introductory Statistics (May satisfy a general education category R)	3
Select one microbiology course & lab from the following:		3-5
MICR 202 & 202L	Introductory Microbiology and Introductory Microbiology Lab	
MICR 350 & 350L	General Microbiology and General Microbiology Lab	
<b>Special Major Electives (department approved)</b>		
Sociology: Select one of the following:		3
SOC 426	Sociology of Medicine	
SOC 440	Sociology of Aging	
SOC 441	Death and Dying	
Communication: Select one of the following:		3
COMM 308	Business and Professional Speaking	
COMM 315	Small Group Communication	
COMM 380	Health Communication I	
COMM 381	Patient-Provider Communication	
COMM 383	Organizational Communication I	
CHP 400	Interprofessional Health Care Practice	
Total Credits		102-107

## Degree Requirements and Notes

- All required courses must be completed with a grade of 'C' or above. All students must maintain a semester GPA of 2.0 or above for each semester in the College. A student who fails to meet this standard for two successive or three non-successive semesters may be terminated from enrollment in the College.

- Completion of the prerequisites does not guarantee a student internship. Selection of interns is competitive. Please consult your Respiratory Care advisor for more information.
- Core courses have a maximum of two attempts allowed. These include:

<b>Code</b>	<b>Title</b>	<b>Credits</b>
BIOC 260 or BIOC 460	Elements of Biochemistry Foundations of Biochemistry and Molecular Biology I	3 or 4
BIOL 220 & 220L	Human Anatomy and Physiology I and Human Anatomy and Physiology I Laboratory	4
PHYS 120	Fundamentals of Physics	3
BIOL 221 & 221L	Human Anatomy and Physiology II and Human Anatomy and Physiology II Laboratory	4
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	4
CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory	4
CHEM 240	Survey of Organic Chemistry	3
MATH 103	College Algebra	3
CHP 125	Medical Terminology for Health Professionals	1
<b>One microbiology course &amp; lab from the following:</b>		<b>3-5</b>
MICR 202 & 202L	Introductory Microbiology and Introductory Microbiology Lab	
MICR 350 & 350L	General Microbiology and General Microbiology Lab	