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/#genedcoursetext).
- 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.

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

* 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

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>CHP 190</td>
<td>Critical Thinking and Academic Success</td>
<td>2</td>
</tr>
<tr>
<td>RC 200</td>
<td>Introduction to Respiratory Care</td>
<td>1</td>
</tr>
<tr>
<td>RC 496</td>
<td>Field Experience</td>
<td>51</td>
</tr>
<tr>
<td>RC 494</td>
<td>Individual Study</td>
<td>4</td>
</tr>
</tbody>
</table>

Advanced clinicals including the capstone experience.

**Related Courses Required:**

- **BIOC 260**  
  Elements of Biochemistry
  
  or **BIOC 460**  
  Foundations of Biochemistry and Molecular Biology I

- **BIOC 260**  
  Elements of Biochemistry

- **BIOC 460**  
  Foundations of Biochemistry and Molecular Biology I

- **BIOC 220**  
  Human Anatomy and Physiology I

  or **BIOC 220L**  
  Human Anatomy and Physiology I Laboratory (May satisfy a general education category S)

- **BIOC 221**  
  Human Anatomy and Physiology II

  or **BIOC 211L**  
  Human Anatomy and Physiology II Laboratory

- **BIOC 240**  
  Survey of Organic Chemistry

- **CHEM 121**  
  General Chemistry I

  or **CHEM 121L**  
  General Chemistry I Laboratory

- **CHEM 122**  
  General Chemistry II

  or **CHEM 122L**  
  General Chemistry II Laboratory

- **CHEM 240**  
  Survey of Organic Chemistry

- **CHP 125**  
  Medical Terminology for Health Professionals

- **CSCI 114**  
  Microcomputer Packages (May satisfy a general education category S)

  or **CSCI 116**  
  Business Use of Computers

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  Microcomputer Packages (May satisfy a general education category S)

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- **CSCI 114**  
  Microcomputer Packages (May satisfy a general education category S)

  or **CSCI 116**  
  Business Use of Computers

- **MATH 103**  
  College Algebra (or higher level; excluding MATH 104)

- **PHYS 120**  
  Fundamentals of Physics (May satisfy a general education category S)

- **PSYC 111**  
  Introduction to Psychology (May satisfy a general education category B)

- **STAT 330**  
  Introductory Statistics (May satisfy a general education category R)

- **MICR 202**  
  Introductory Microbiology

  or **MICR 202L**  
  Introductory Microbiology Lab

- **MICR 350**  
  General Microbiology

  or **MICR 350L**  
  General Microbiology Lab

**Special Major Electives (department approved):**

- **Sociology:** Select one of the following:
  - **SOC 426**  
    Sociology of Medicine
  - **SOC 440**  
    Sociology of Aging
  - **SOC 441**  
    Death and Dying

- **Communication:** Select one of the following:
  - **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:

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<tr>
<td>BIOC 260</td>
<td>Elements of Biochemistry</td>
<td>3 or 4</td>
</tr>
<tr>
<td>or BIOC 460</td>
<td>Foundations of Biochemistry and Molecular Biology I</td>
<td></td>
</tr>
<tr>
<td>BIOL 220 &amp; 220L</td>
<td>Human Anatomy and Physiology I and Human Anatomy and Physiology I Laboratory</td>
<td></td>
</tr>
<tr>
<td>PHYS 120</td>
<td>Fundamentals of Physics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 221 &amp; 221L</td>
<td>Human Anatomy and Physiology II and Human Anatomy and Physiology II Laboratory</td>
<td></td>
</tr>
<tr>
<td>CHEM 121 &amp; 121L</td>
<td>General Chemistry I and General Chemistry I Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 122 &amp; 122L</td>
<td>General Chemistry II and General Chemistry II Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 240</td>
<td>Survey of Organic Chemistry</td>
<td>3</td>
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<td>MATH 103</td>
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<td>Medical Terminology for Health Professionals</td>
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**One microbiology course & lab from the following:**

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</thead>
<tbody>
<tr>
<td>MICR 202 &amp; 202L</td>
<td>Introductory Microbiology and Introductory Microbiology Lab</td>
<td>3-5</td>
</tr>
<tr>
<td>MICR 350 &amp; 350L</td>
<td>General Microbiology and General Microbiology Lab</td>
<td></td>
</tr>
</tbody>
</table>