

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number:** RTH 102      **Credits:** 3

**Course Title:** Integrated Sciences for Respiratory Care

**Course Description:**

Integrates the concepts of mathematics, chemistry, physics, microbiology, and computer technology as these sciences apply to the practices of respiratory care.  
Lecture 3 hours per week. 3 credits

**General Course Purpose:**

This course teaches students how basic principles of math and science can be used to identify and modify treatment options and care for patients with respiratory diseases and disorders.

**Course Prerequisites and Co-requisites:**

None

**Student Learning Outcomes:**

Upon completing the course, the student will be able to:

- Review the basic scientific principles, definitions, and concepts applicable to respiratory care;
- Apply the basic concepts of chemistry to the practice of respiratory care;
- Apply the basic mathematical concepts used in the practice of respiratory care;
- Apply the basic concepts of fluid physics to the practice of respiratory care;
- Relate the basic concepts of microbiology to the practice of respiratory care; and
- Introduce the concepts and skills associated with computer technology in respiratory care.

**Major Topics to Be Included:**

- Metric system
- Chemistry
- General principles of gas physics
- Fluid/electrolytes
- Microbiology

**Effective Date/Updated:** August 1, 2021