

Anatomy and Physiology II

Learning Guide: Respiratory System

Overview – The respiratory system begins with a detailed description of both the upper and lower respiratory tracts. Once the anatomical foundation is laid, special topics will be covered, such as the structure and function of the larynx, the role of surfactants in maintaining alveolar structure, partial pressure, and gas exchange.

Review Topics – There are several topics from previous modules as well as A&P I that will be reviewed and expanded upon:

- The bones associated with the nasal cavity will be reviewed from A&P I.
- CO₂ transport will also be reviewed and expanded.
- Applications involving buffer systems
- The relationship between the respiratory system, glycolysis, and cellular respiration will be discussed at specific points.

Getting Started This module is large, and we aim to divide it into two parts, Part #1 and Part #2. Your [Course Schedule](#) will indicate if it is divided.

- **Part #1** will go from the Introduction to the Alveolar Macrophages.
- **Part #2** will go from Lung Anatomy to Gas Transport.

Exam – The exam will include several illustrations that include the names and functions of anatomical structures. You will want to make sure you know the anatomy well. Unique to these exams are "*guided short answer questions.*" These are just like a guided-essay but tend to be a bit shorter. They are:

Part #1

- Olfactory Epithelia
- Eustachian Tube Function
- Anatomy and function of the larynx
- Surfactant and Alveolar Structure

Part #2

- Partial Pressure and Gas Movement
- Hemoglobin Carrying Capacity
- Lung Inflation and Pneumothorax
- CO₂ and O₂ Exchange (know illustration well)

We may not be doing “Breathing Mechanics.”

IMPORTANT - When you do the “short stories” on the exam, your answer must reflect the module content as presented in the lecture. If an answer is correct, but it

was not used in the module sequence, it will be marked incorrect for the purposes of the exam. Please ensure that your answers reflect an understanding of the content as presented.

Laboratory – A visual review of the respiratory system structures will resemble how we Prepared for the first Laboratory Practical. You will want to know the images of the models well. The respiratory, digestive, and urinary systems will make up the second laboratory practical exam. This exam will consist of images from the laboratory resources on the website. Questions are fill-in-the-blank. The second lab practical structures list can be found under "Laboratory" on the web. Press here for the Laboratory Videos: [Laboratory Videos of the Respiratory System](#).

Final Point – Again, as this is a large unit, please plan your time accordingly. It is also a good idea to begin looking at the associated lab material as that will help to reinforce a visual approach to the anatomy.