**Physiology**

LECTURE 1

**The goal of physiology** is to explain the physical and chemical factors that are responsible for the origin development, and progression of life.

**Human physiology**, we attempt to explain the specific characteristics and mechanisms of the human body that make it a living being.

**Respiratory System**

What is the main function of your respiratory system?

The main function of your respiratory system is to pull in oxygen for your body’s cells and get rid of carbon dioxide, a waste product. You do this by breathing in and out and through gas exchange between the small air sacs of your lungs (alveoli) and the blood vessels running nearby. Your respiratory system also:

1. Warms and adds moisture to the air you breathe in. Your respiratory system warms the air to match your body temperature. It moisturizes the air to bring it to the humidity level your body needs.
2. Protects your body from particles you breathe in. Parts of your respiratory system can block harmful germs and irritants from getting in — or push them out if they do get in.
3. Helps you smell. Breathing in air moves its molecules past your olfactory nerve, which sends messages to your brain about the way something smells.
4. Balances level of acidity in your body. Too much carbon dioxide lowers your blood’s pH, making it acidic. By removing carbon dioxide, your respiratory system helps maintain the acid-base balance in your body.

Urinary System

How Does the Urinary System Work?

How the urinary system works is relatively simple, although the supplementary roles of the kidneys can be complex.

1. Blood is transported to the kidneys via the renal artery.
2. A system of filtration units within the kidney regulates levels of dilution (water), salts and other small molecules in the filtrate.
3. Any excess or undesired products travel through each ureter and are deposited into the reservoir of the bladder, while purified blood re-enters the circulatory system by way of the renal vein.
4. Urine is stored in the bladder until the urinary nervous system releases the contents through the urethra and out of the body.
5. The passing of urine is known as micturition or urination.