**Laboratory Learning Outcomes and Objectives**

**Laboratory 12: INTRODUCTION TO PHYSIOLOGY - HOMEOSTASIS**

*After completion of this laboratory session, and with 70% accuracy on the first laboratory quiz, the student should be able to:*

1. Lungs:
   1. Describe the anatomy of the lungs and their role in homeostasis
   2. Describe the microscopic anatomy of the lungs and the role of the alveoli in gas exchange
2. Liver:
   1. Describe the anatomy of the liver and its role in homeostasis.
   2. Trace the path of blood from the intestines, through the liver and to the heart
3. Kidney:
   1. Describe the anatomy of the kidneys and their role in homeostasis
   2. Trace the path of blood from the heart to the kidneys, about a nephron, and back to the heart
   3. State the three steps in urine formation and how they relate to the parts of a nephron
   4. Predict whether substances will be in the filtrate and/or urine, and explain
   5. Know how to use/read test strips for urinalysis and detect and discuss abnormalities.
4. Capillary Exchange in the Tissue:
   1. Describe the exchange of molecules across a capillary wall and the mechanisms involved