

**West Linn–Wilsonville School District**  
**Science Department – Course Statement**

**Course Title: Anatomy and Physiology I**

**Length of Course:** Semester  
**Number of Credits:** .5  
**Grade Level:** 10, 11, 12  
**Prerequisites:** Biology  
**Work Samples**  
**Offered in Course:** Scientific Inquiry  
**Lab Class:** Yes

**Date of Description/Revision:** 2002

**Course Overview**

Interested in learning more about how your body works? This class provides an overview of the major body systems in the human being: skeletal, muscular, respiratory, cardio-vascular and digestive. Emphasis is placed on learning the structure of organs and how body systems work together to help keep you alive. Labs are performed weekly to reinforce these concepts. Students will also gain an understanding of comparative anatomy through dissections of various organisms. The class is comprised of lectures, lab experiences, projects and a capstone field trip. This class will be useful to any student interested in the health care profession.

**Essential Questions**

**Concepts providing focus for student learning**

- How do body systems work together to promote homeostasis in humans?
- How does the study of structure help us understand the relationship between cells, tissues, and organs?
- What can we gain from careful dissections of organisms?
- Why is the use of correct anatomical language necessary in scientific communication?

**Proficiency Statements**

- Upon completion of course, students will be able to:
- Use correct anatomical terminology to describe body directions, regions, planes, and sections.
  - Identify body locations where the various tissue types can be found and how the tissue structure aids in the organ's function.
  - Explain how the structure and constant remodeling of bone makes it an ideal support structure for the body.
  - Give examples of various joint types and the movements they permit.
  - Describe the structure of a muscle fiber and explaining how a muscle contracts.
  - Compare and contrast the three types of muscle tissue.
  - Describe the role of each of the formed elements in the blood.

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- Compare and contrast the structure and function of arteries, veins and capillaries.
- Trace the path of blood as it travels through the systemic circuit, heart, and pulmonary circuit.
- Describe the process and pathway air takes into the body.
- Describe the role of diffusion and partial pressure in the movement of air.
- Explain the role of enzymes in the digestive process.
- Trace the path of food in the digestive tract describing the digestion and absorption along each step of the pathway.
- Demonstrate proper dissection technique.

<b>General Course Topics/Units &amp; Timeframes</b>	
<ul style="list-style-type: none"> <li>A. Body Organization / Homeostasis</li> <li>B. Cells / Tissues</li> <li>C. Skeletal System</li> <li>D. Muscular System</li> <li>E. Circulatory System / Blood</li> <li>F. Respiratory System</li> <li>G. Digestive System</li> <li>H. Dissection / Laboratory Techniques</li> </ul>	
<b>Resources</b>	
<ul style="list-style-type: none"> <li>• Text: <i>Essentials of Human Anatomy and Physiology, 6<sup>th</sup> Edition</i>, Prentice Hall/Addison Wesley, 2000</li> </ul>	