

West Linn–Wilsonville School District
Science Department – Course Statement

<u>Course Title: Anatomy and Physiology II</u>	
Length of Course:	Semester
Number of Credits:	.5
Grade Level:	10, 11, 12
Prerequisites:	Anatomy and Physiology I or Advanced Placement (AP) Biology
Work Samples	
Offered in Course:	Scientific Inquiry
Lab Class:	Yes
Date of Description/Revision: 2002	
Course Overview	
<p>This course is an in-depth study of the human body, focusing on the endocrine, immune, integumentary, urinary, muscular, and nervous systems. Students should be familiar with anatomical terminology and will continue to practice dissection techniques. Dissection of individual organs will be emphasized as well as an in-depth study of the cat. Class will consist of lectures, lab experiences, dissections, and projects. Great class for anyone interested in the health care field!</p>	
Essential Questions	Concepts providing focus for student learning
<ul style="list-style-type: none"> • How do body systems work together to promote homeostasis in humans? • How does the study of structure help us understand the function of cells, tissues, and organs? • What information can we gain from careful dissections of organisms? • Why is the use of correct anatomical language necessary in scientific communication? • How do various diseases upset homeostasis in the body? 	
Proficiency Statements	
<p>Upon completion of course, students will be able to:</p> <ul style="list-style-type: none"> • Use correct anatomical names to describe the major body cavities, membranes, and regions. • Examine irregularities in the body and determine how they might affect homeostasis. • Describe the role of the plasma membrane in cells and in interactions with the environment. • Name the specific tissue types and layers composing the epidermis and dermis. Describe the function of each. • Explain how serious skin alterations upset homeostatic balances. • Explain how hormonal controls and physical stresses regulate to the body. • Be able to identify key muscles, origins, and insertions on a cat and human. • Indicate important differences between endocrine and neural controls of body functioning. • Describe the major mechanisms by which hormones bring about their effects on target tissues 	

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<p>and explain how hormone release is regulated.</p> <ul style="list-style-type: none"> • Describe the process of urine formation, identifying the areas of the nephron that are responsible for filtration, re-absorption, and secretion. • Explain the role of the kidney in regulating water, sodium and potassium balance in the body. • Describe the structure and function of the various sense organs. • Describe the events involved in the stimulation and response of sense organs. • Depict how a message is transmitted from an outside stimulus, is processed, and results in a response. • Relate various structures of the brain to their function. 	
General Course Topics/Units & Timeframes	
<ul style="list-style-type: none"> A. Body Organization B. Cell structure / Function C. Integumentary System D. Muscular System E. Endocrine System F. Urinary System G. The Sense Organs H. Nervous System I. Dissection 	
Resources	
<ul style="list-style-type: none"> • Text: <i>Essentials of Human Anatomy and Physiology</i>, 6th Edition, Prentice Hall, Addison Wesley, 2000 	