This lecture’s learning objectives are:
1. Define the terms ANATOMY & PHYSIOLOGY
2. Define the characteristics of the human organism
3. Understand the levels of complexity that make up the human organism
4. Define Homeostasis and understand its role in maintaining life processes in the human body.

GROUND RULES FOR CLASSROOM BEHAVIOR
• Cell phones/beepers - OFF!
• No food or drink
• No newspapers
• Late arrival/early departure procedures
• RESPECT - YES!
• POSITIVE ATTITUDE - YES!

Text Book
• Tortora: Introduction to the Human Body
• MUST HAVE: Selections from Illustrated Notebook
• Can use any other A&P text book, but I will not provide reading assignments for these

Web Site
• http://public.iastate.edu/~zool.155

ACADEMIC SUCCESS CENTER
• Student Services Bldg
• Tutoring
• Disability resources
• Learning lab

SUPPLEMENTAL INSTRUCTION

TERMINOLOGY
• ANATOMY
  — study of STRUCTURE and the relationship between structures

• PHYSIOLOGY
  — study of FUNCTIONS of the body parts

COMPLIMENTARITY OF STRUCTURE AND FUNCTION

CHARACTERISTICS OF LIFE
• MOVEMENT
• RESPOND TO STIMULI
• METABOLISM
• REPRODUCTION
• GROWTH

STRUCTURAL COMPLEXITY
• Chemical level
• Cellular - the cell is the basic functional unit of the body
• Tissue
• Organ
• System (x11)
• Organism

Homeostasis
Homeo = same
Stasis = standing still

• Internal environment remains relatively constant in spite of the changing external environment

The variables within the body that need to be maintained within an optimal range:
• Optimum concentration of gases, nutrients and water
• Optimal temperature
• Optimal pressure
Control Mechanisms

• Nervous system

• Endocrine system

For next class, and for the entire course, the following DIRECTIONAL TERMS must be memorized:

— Superior
— Inferior
— Anterior/Ventral
— Posterior/Dorsal
— Medial
— Lateral
— Proximal
— Distal

For next class, and for the entire course, the following PLANES of the body must be memorized:

• Transverse plane
• Frontal plane
• Median (midsagittal) plane

QUESTIONS:

Describe the difference between anatomy and physiology and explain why they are so interconnected.

What is the meaning of COMPLIMENTARITY

List the levels of structural complexity found in the human body.

Explain why the process of homeostasis is vital to the survival of the human species