


**Welcome to**  
**Human Anatomy & Physiology**  
 BI 235 - Winter 2012

Introduction

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Office Hours: **M / T / W / R / F: 10:00 – 11:00 am**

Lectures: **MWF: 9:00 – 9:50 am**      **HWC 105**

Labs: **No Lab = See Me!**      **NS 006**

- Anatomical examination of histology and body systems
- Prepared slides; anatomical models; human cadavers
- Laboratories start Week 3

Required Text:  
**Anatomy and Physiology – Marieb and Hoehn (4<sup>th</sup> ed.)**

Optional Text:  
**A Photographic Atlas for Anatomy & Physiology Lab**

Introduction

Grading:

<b>Exam 1</b> (27 Jan)	75
<b>Exam 2</b> (13 Feb)	75
<b>Exam 3</b> (2 Mar)	75
<b>Final</b> (19 Mar)	125
<b>Laboratory</b>	<u>150</u>
	<b>500</b>

Testing Format:

- Multiple choice
- True/False
- Matching (w/ Diagrams)
- Fill-in-the-blank / Short answer

Grading Scale (approximate):

100 - 90% = A	65 - 55% = D
90 - 80% = B	< 55% = F
80 - 65% = C	


\* Curve may be utilized at end if average falls below 73%

Introduction



Web Site: <http://www.wou.edu/~lemastm/Teaching/BI235>

How to get the most out of BI 235:

- Come to class
- Read the book before lecture
- Do your best in lab (It's 30% of your grade!)
- Seek understanding of concepts.
  - talk to your professor
  - visit the tutoring center
  - start a study group
- Stay **Healthy!**
- Apply what you learn!






= 1 Hour

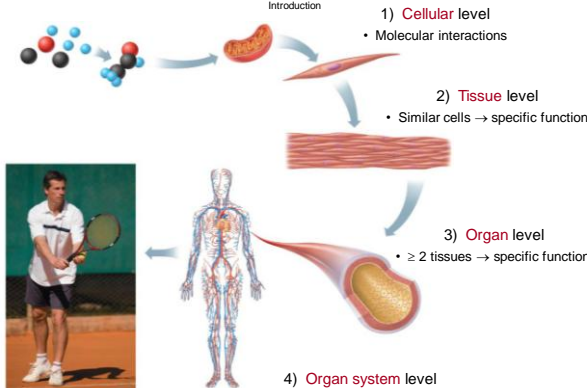



The Warning:

If you take any medicines that have nitrates in them (e.g., nitroglycerin for chest pain), you should NOT take VIAGRA.

Introduction



1) **Cellular level**  
 • Molecular interactions

2) **Tissue level**  
 • Similar cells → specific function

3) **Organ level**  
 • ≥ 2 tissues → specific function

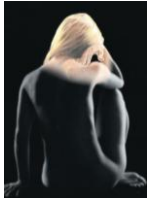
4) **Organ system level**  
 • ≥ 2 organs → specific function

5) **Organism level**  
 • Organ systems = life

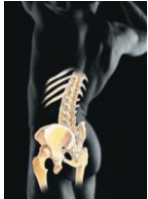
Marieb & Hoehn – Figure 1.1

Introduction


Organ Systems:  
 (BI 234)




Integumentary System



Skeletal System



Muscular System

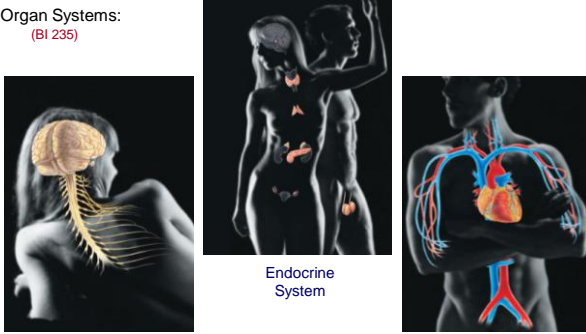


Immune System

Marieb & Hoehn – Figure 1.3

Introduction

Organ Systems:  
(BI 235)



Nervous System

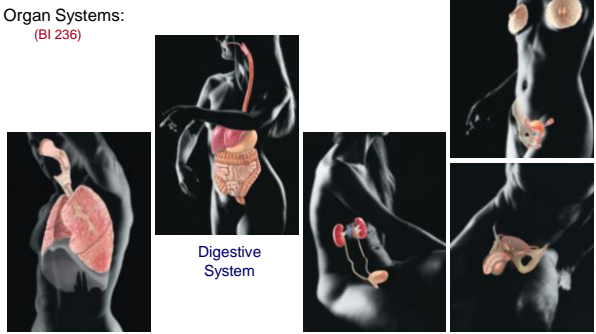
Endocrine System

Cardiovascular System

Marieb & Hoehn – Figure 1.3

Introduction

Organ Systems:  
(BI 236)



Respiratory System

Digestive System

Urinary System

Reproductive System

Marieb & Hoehn – Figure 1.3

Introduction

Regulatory System Function:

**For life to continue, precise internal body conditions must be maintained regardless of external conditions**

The principle function of regulatory systems is to maintain **homeostasis**

**Homeostasis:** The process of maintaining a relatively stable internal environment (Cannon – early 20<sup>th</sup> century)

- Not a static process (dynamic equilibrium)
- Requires energy (unlike a true equilibrium state)
- Conditions maintained via **feedback systems**

Introduction

Feedback System:

autoregulation vs. extrinsic regulation

Body Temp = 96.5° Information

(Set Point) (98.6°)

Control Center (Hypothalamus)

Receptor (transducer)

Effector (Muscles)


Effect (Shivering)

(Change in system) (Body heats up)

Feedback (-)

**Negative Feedback:** Drives system toward set point (e.g., temperature regulation)

Most common type of feedback system found in the human body



Introduction

Feedback System:

autoregulation vs. extrinsic regulation

Cervix stretches Information

(Set Point)

Control Center (Hypothalamus)

Receptor (transducer)

Effector (Posterior Pituitary)

Effect (↑ oxytocin release)

(Change in system) (Uterine contractions intensify)

Feedback (+)

**Positive Feedback:** Drives system away from set point (e.g., child birth)

Rare type of feedback system found in the human body