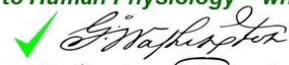




...Welcome to Human Physiology – what makes us tick!



BI 121 Lecture 1

- I. Announcements**: Please check & sign attendance roster. Not on list? See Pat during break/> class. **Lab 1 Histology** tomorrow in 130 HUE: 12 n & 1 pm sections. Much fun!!
- II. Introduction**: Staff, office hr, required sources, course overview, grading, expectations & success. Q?
- III. Human Physiology** LS ch 1, DC Module 1
 - A. What? cf: Anatomy LS p 1
 - B. Where? Body Levels of Organization LS pp1-6, DC pp1-5
 - C. How? Different Study Approaches LS p 1
 - D. Why? Security+Decision-Making Power LS p xxi, DC p v
- IV. Homeostasis** LS ch 1, DC Module 1
 - A. What? Maintenance of ECF LS p 8
 - B. Where? ECF = Plasma + Interstitium LS fig 1-4 p 8
 - C. How? Simplified Homeostatic Model cf: LS fig 1-7 p 14 Balances LS p 9, DC pp 5-6
 - D. Why? Cell survival! LS fig 1-5 p 9, DC p 5



...Anatomy & Physiology Lab Thurs! Fun again!

BI 121 Lecture 3

- I. Announcements** AEC Notes? aec.uoregon.edu/peer-notetaking
- II. Connections** Q re: Homeostatic Model for BP? Active work!
- III. Cell Anatomy, Physiology & Compartmentalization** LS ch 2
 - A. How big? What boundaries? Why compartments? pp19-21
 - B. Basic survival skills ch 1 p 3
 - C. Organelles ≡ Intracellular specialty shops w/membranes
 - 1. Endoplasmic Reticulum (ER) 2. Golgi 3. Lysosomes
 - 4. Peroxisomes & 5. Mitochondria. LS 2012 pp 20-34 fig 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8 pp 20-7 tab 2-1 p 36
 - D. What about vaults? LS 2006, p 32
 - E. **Physiol News** Moms eggs execute Dad's mitochondria?
- IV. Anaerobic vs Aerobic Metabolism Overview** Many sources! Mathews & Fox 1976...LS 2012 pp 26-33, fig 2-15 p 33
- V. Introduction to Genetics** LS 2012 ch 2 p 20-1 + Appendix C
 - A. What's a gene? Where? p A-18, fig C-2, C-3
 - B. Why are genes important? p A-18
 - C. What's DNA & what does it look like? pp A-18 thru A-20
 - D. How does information flow in the cell? fig C-6
 - E. How does DNA differ from RNA? pp A-20 thru A-22
 - F. Genetic code? pp A-22, A-23
 - G. How are proteins made? fig C-7, C-9



... Thanks for signing attendance roster & noting late arrival or early departure time!



BI 121 Lecture 2

- I. Announcements** Lab 1 Histology today!130 HUE. Fun! **Please record your diet on p 3-7 LM & analyze it by Friday with <https://www.supertracker.usda.gov/>** Estimating quantities. Q?
- II. Homeostasis** LS ch 1, DC Module 1
 - A. **What?** Maintenance of ECF LS p 8
 - B. **Where?** ECF = Plasma + Interstitium + ? LS fig 1-4 p 8
 - C. **Homeostatic Balances?** LS p 9, DC pp 5-6
 - D. **Why?** Cell survival! LS fig 1-5 p 9, DC p 5
 - E. **Physiology in the News** H₂O? Are we like watermelons?
 - F. **How** are balances maintained? Simplified Homeostatic Model cf: LS fig 1-7 p 14; T°C + BP balance e.g. + vs. - FB
- III. Cell Anatomy, Physiology & Compartmentalization** LS ch 2
 - A. How big? What boundaries? Why compartments? pp 19-21
 - B. Basic survival skills LS ch 1 p 3
 - C. Organelles ≡ Intracellular specialty shops
 - Endoplasmic Reticulum (ER), Golgi, Lysosomes, Peroxisomes & Mitochondria, LS fig 2-1, 2-2, 2-3 pp 20-3

Anatomy & Physiology Lab today!...

Exam I next Thursday > 4th of July!!



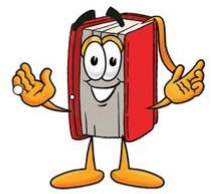
BI 121 Lecture 4

- I. Announcements** Nutrition Analysis Lab next Thursday! **Please record your diet on p 3-7 LM & complete analysis by tomorrow using <https://www.supertracker.usda.gov/>** Q?
- II. Physiol News** Moms eggs execute Dad's mitochondria?
- III. Cell Physiology, Mitochondria & Metabolism Connections** LS 2012 fig 2-9 thru 2-12, 2-15 +...Mathews & Fox 1976
- IV. Introduction to Genetics** LS ch 2 p 20-1 + Appendix C
 - A. What's a gene? DNA? Why important? pp A-18 thru A-20 +
 - B. How does information flow in the cell? fig C-6
 - C. How does DNA differ from RNA? pp A-20 thru A-22
 - D. Genetic code? pp A-22, A-23
 - E. How & where are proteins made? fig C-7, C-9
 - F. Class skit: Making proteins @ ribosomes!
- V. Nutrition Primer** DC Module 2, Sizer & Whitney(S&W) Sci Lib
 - A. Essential Nutrients: H₂O, 1^o Carbohydrates, 2^o Fats, 3^o Proteins, Vitamins, Minerals; Macro- vs Micro-?
 - B. Dietary Guidelines: USDA, AICR, Eat Like the **Rainbow!**





Hey - I'll be ready because I book it!!



BI 121 Lecture 5

- I. **Announcements** Data + Flashdrive for Thursday's lab! Q? Thanks for recording dietary data on LM p 3-7 & finishing <https://www.supertracker.usda.gov/>. Sample Exam Questions.
- II. **Nutritional Physiology in the News** Pondering Paleo Nutrition Action Health Letter, Marlene Zuk, U Minn. Animal sources, inflammation & disease? Drink Your Calories? *PEBB* Shake the salt habit! *UC Berkeley Newsletter*. Successful Dieting?
- III. **Nutrition Primer** DC Module 2,Sizer & Whitney (S&W) Sci Lib
 - A. Dietary Guidelines: USDA, AICR, Eat Like the **Rainbow!**
 - B. Best path to weight loss? Diet or exercise or both? Dietary composition & endurance? Fasting? Zuti & Golding 1976; Sacks **AHA NPAM** 2009; AMDR?
 - C. **Nutrition Quackery, Balanced Approach** Kleiner, Monaco+
- IV. **Digestion** LS 2012 ch 15, pp 437-9, DC Module 3 pp 17-23
 - A. Steps of digestion Dr. Evonuk + LS pp 437- 9; DC p 23
 - B. Hydrolysis + monomer to polymer: central linking themes! LS p 438, Fox 2009 +
 - C. What's missing? LS fig 15-1 p 438
 - D. GI-Donut analogy + Control mechanisms. Dr. Brilla @ WWU
 - E. Gut secretions LS p 438, 440-1
 - F. Organ-by-organ review LS tab 15-1 pp 440-1 + DC fig 3-1

BI 121 Lecture 6

- I. **Announcements** Next session Q? ~1/2 review, then Exam I. Fun Lab 3 Nutrition after Exam II Q?
- II. **Nutrition News + Connections** Be a whiz at healthy grilling! *American Institute for Cancer Research, Grilling Quiz!* *Dietary Guidelines for Americans 2015-2020, Blue Zones?*
- III. **Digestion Connections** LS ch 15, DC Module pp 17-23
 - A. Histology of the gut LS fig 15-2, 15-3 p 442-3
 - B. Stomach protein digestion + zymogens? LS fig 15-7, 15-9
 - C. Accessory organs: Pancreas & Liver + Recycling! LS pp 457-63
 - D. Small intestine? Ulcers? LS fig 15-20,15-22 pp 467-8 <http://www.cdc.gov/ulcer> Beyond the Basics LS p 456
 - E. Summary of chemical digestion LS tab 15-5 p 466
 - F. Large intestine? LS fig 15-24 pp 472-4

Exam I Review Slides