Bl 121 Lecture 1
...Welcome to Human Physiology - what makes us tick!

I. Announcements: Please check & sign attendance roster. Not on list? See Pat during a break or after class. Lab 1 Histology tomorrow in 130 HUE: 12 n & 1 pm sections.

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

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
D. Why? Cell survival! LS fig 1-5 p 9, DC p 5

Bl 121 Lecture 2
...Histology exploratory fun!! Thanks for signing in!

I. Announcements Lab today 12 n & 1 pm. Q last time?

II. Connections Extracellular fluid (ECF) & Homeostasis
A. ECF: Plasma vs. Interstitium?
B. Dr Evonuk Balances LS pp 5-15
C. Physiology in the News Are we like watermelons?
D. Simplified Model DO Norris cf: fig 1-8 LS
E. Negative feedback? Positive feedback? LS pp 14-15
F. Balances & e.g. H2O, T°C, BP Dr Evonuk + LS pp 8-10

III. Cell Anatomy, Physiology & Compartmentalization ch 2 (LS)
B. Basic survival skills ch 1 p 3
C. Organelles = Membranous, cytoplasmic specialty shops!
1. Endoplasmic Reticulum (ER) 2. Golgi 3. Lysosomes
   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. Physiol News Moms eggs execute Dad’s mitochondria?
E. What about vaults? LS 2006, p 32 + Science News

Bl 121 Lecture 3
Anatomy & Physiology Lab tomorrow!...

I. Announcements Q from lecture or lab?

II. Cell Physiology Connections LS ch 2 pp 20-34, fig 2-1...2-8
4. Peroxisomes 5. Mitochondria tab 2-1 p 36
B. Exocytosis vs. Endocytosis fig 2-5 a & b, p 25
C. Physiol News Moms eggs execute Dad’s mitochondria?

III. Anaerobic vs Aerobic Metabolism Summary LS ch 2 pp 26-33
A. Key differences fig 2-15 + vpl
B. Selected details: Glycolysis, CAC, ETC, fig 2-9 thru 2-12

IV. Introduction to Genetics LS 2012 ch 2 p 20-1 + Appendix C
B. How does information flow in the cell? fig C-6
C. How does DNA differ from RNA? pp A-20 thru A-22
E. How & where are proteins made? fig C-7, C-9
F. Class skit: Making proteins @ ribosomes!

Bl 121 Lecture 4
Anatomy & Physiology Lab today!...
Exam I next Thursday > 4th of July!!


II. Cell Metabolism Connections LS 2012 fig 2-9 thru 2-12 + ...

III. Introduction to Genetics LS ch 2 p 20-1 + Appendix C
B. How does information flow in the cell? fig C-6
C. How does DNA differ from RNA? pp A-20 thru A-22
E. How & where are proteins made? fig C-7, C-9
F. Class skit: Making proteins @ ribosomes!

IV. Nutrition Primer DC Module 2, Sizer & Whitney (S&W) Sci Lib
A. Essential Nutrients: H2O, 10 Carbohydrates, 20 Fats, 30 Proteins, Vitamins, Minerals; Macro- vs Micro-?
B. Dietary Guidelines: USDA, AICR, Eat Like the Rainbow!
C. Diet or exercise? Diet composition & endurance? Fasting?
D. Nutrition Quackery, Balanced Approach Kleiner, Monaco+
BI 121 Lecture 5

I. Announcements  Data + Flashdrive for Thursday’s lab! Q?
   Thanks for recording dietary data on LM p 3-7 & exploring

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

Hey – I’ll be ready because I book it!!

BI 121 Lecture 6 + Q + ½ Midterm Review

I. Announcements  Next session Q? ~½ review, then Midterm.
   Fun Lab 3 Nutrition today! Sample Suisse Calculation? Q?

II. Nutrition in the News  Be a whiz at healthy grilling!
   American Institute for Cancer Research, Grilling Quiz!

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
      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

IV. Midterm Review  Discussion + Q?