Announcements: Please check & sign attendance roster. Not on list? See Pat during break/class. Lab 1 Histology Thursday, 10 am – 5 pm sections in 130 HUE. Much fun!!

Introduction: Staff, office hr, required sources, course overview, grading, expectations & success. Q?

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

Homeostasis LS ch 1, DC Module 1
A. What? Maintenance of ECF LS p 8
B. Where? ECF = Plasma + Interstitial LS fig 1-4 p 8
C. How? Simplified Homeostatic Model cf: LS fig 1-7 p 14
D. Why? Cell survival! LS fig 1-5 p 9, DC p 5

Announcements Registered? AEC Notes? Come to office hr!
V. Connections Videos + Q about Homeostatic Model for BP

Cell Anatomy, Physiology & Compartmentalization LS ch 2
B. Basic survival skills ch 1 p 3
C. Organelles ≡ Intracellular specialty shops w/membranes
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. What about vaults? LS 2006, p 32
E. Physiol News Moms eggs execute Dad’s mitochondria?

Anaerobic vs Aerobic Metabolism Overview Many sources!
Mathews & Fox 1976...LS 2012 pp 26-33, fig 2-15 p 33

Introduction to Genetics LS 2012 ch 2 pp 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
G. How are proteins made? fig C-7, C-9

Announcements Lab 1 Histology today!

Homeostasis LS ch 1, DC Module 1
A. What? Maintenance of ECF LS p 8
B. Where? ECF = Plasma + Interstitial 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

Cell Anatomy, Physiology & Compartmentalization LS ch 2
B. Basic survival skills LS ch 1 p 3
C. Organelles ≡ Intracellular specialty shops
1. Endoplasmic Reticulum (ER), Golgi, Lysosomes,
2. Peroxisomes & Mitochondria, LS fig 2-1, 2-2, 2-3 pp 20-3

Announcements Anatomy & Physiology Lab Thurs! Fun again!

Connections Videos + Q about Homeostatic Model for BP

Cell Anatomy, Physiology & Compartmentalization LS ch 2
B. Basic survival skills ch 1 p 3
C. Organelles ≡ Intracellular specialty shops w/membranes
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
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Introduction to Genetics LS 2012 ch 2 pp 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
G. How are proteins made? Class skit! fig C-7, C-9
I. **Announcements** Nutrition Analyses this Thursday!
   Please record diet on p 3-7 LM & begin analysis using https://www.supertracker.usda.gov/
   Bring flash drive? Q?

II. **Introduction to Genetics** LS 2012 ch 2 p 20-1 + Appendix C
   A. How does DNA differ from RNA? pp A-20 thru A-22
   C. How & where are proteins made? fig C-7, C-9
   D. Class skit: Making proteins @ ribosomes!

III. **Nutrition Primer** Sizer & Whitney (S&W) Sci Lib
   A. Essential Nutrients: H₂O, 1° Carbohydrates, 2° Fats, 3° Proteins, Vitamins, Minerals; Macro- vs Micro-?
   C. Dietary Guidelines: USDA, AICR, Eat Like the Rainbow!
   D. Diet or exercise? Diet composition & endurance? Zuti & Golding 1976! Fasting?
   E. Beware of Nutrition Quackery S. Kleiner & Monaco 1990!

IV. **Nutrition in the News** Gain weight by drinking calories?
   V. **Introduction to Digestion** Steps + hydrolysis

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Bl 121 Lecture 6

I. **Announcements** Data + flash drive for today’s lab! Q?
   If you want notebook to study for Exam 1 on Tues Oct 24th turn in prior to lecture next Tues Oct 17th. Sample Exam Q?

II. **Nutrition Connections + Nutritional Physiology in the News**
   A. Pondering Paleo. Animal sources, inflammation & disease?
   B. Lifestyle modifications & reducing disease risk?
   C. Shake the salt habit! UC Berkeley Newsletter.
   D. Drink Your Calories? Public Employees Benefit... 
   E. Dietary Guidelines: USDA, AICR, Eat Like the Rainbow!
   G. Beware of Nutrition Quackery S. Kleiner & Monaco 1990!

III. **Gastrointestinal Physiology** DC Module 3 pp 17-23, LS ch 15+
   A. Steps of digestion Dr. Evonuk + LS pp 437-9; DC p 23
   B. Hydrolysis + monomer to polymer: central linking themes!
   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

Bl 121 Lecture 7

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I. **Announcements** Exam 1 one week from today, Oct 24th!
   Summary & Review, Sunday Oct 22nd, 6-7:30 pm, here! Q?

II. **Gastrointestinal Physiology** DC Module 3 pp 17-23, LS ch 15+
   B. How is the gut controlled?
   C. Organ-by-organ review A&P LS tab 15-1 pp 440-1 + ...
   D. Zymogen? = Inactive precursor LS fig 15-9 p 452...
   G. Large intestine? LS fig 15-24 pp 472-4

III. **Cardiovascular System** DC Mod 4, LS ch 9, Torstar, G&H+
   A. Circulatory vs. Cardiovascular (CV)? CV vs. Lymphatic CV Pulmonary & Systemic circuits DC pp23-31+LS p229+DC fig 4-1 p 24, LS fig 9-2b p 231
   B. Arteries, capillaries, veins, varicosities? G&H, Torstar, DC
   C. layers, box, chambers, valves, inlets, outlets
   D. Normal vs. abnormal blood flow thru & CVS LS, Fox+...

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Bl 121 Lecture 8

I. **Announcements** Exam 1 next session; 12 n & 1 pm lab sections go directly to 112 HUE & 130 HUE. All others here (100 WIL)! Review: Sunday, 6 pm here! Lab notebooks. Q?

II. **Cardiovascular Connections** LS 2012 ch 9, Torstar Books+

III. **CV Physiology in News** AHA + NHLBI websites. Nic? ACSM, AHA, DHHS Healthy people exercise guidelines!

IV. **CV Pathophysiology & Risk Reduction** LS ch 9, 10+...
   A. AMI, CVA, CVD, PVD, TIA, HTN? + surgical treatments
   B. Atherosclerosis? LS fig 9-27, 9-25, 9-26 pp 266-8
   C. How to minimize risk of CVDs? Treatment triad: Exercise, Diet, Drugs+Surgery
   D. Food choices make a difference? What’s HAPC?