

College Of DuPage

Anatomy & Physiology-I 1551-603

Lecture/Discussion- Monday, Wednesday 08:00AM - 10:50AM

Lab/ Discussion –Monday, Wednesday 08:00AM - 10:50AM

From 08/26/2013-12/18/2013

Tentative course syllabus

Dr.Mrs.Jagruti J.Dave.

Fall-2013---16 weeks course

Office: Part-time Faculty Center Naperville Center

Phone- Voice mail (630)-942-2800-ext :51953.

Health science Division office (USE EMAIL AS CONTECT WITH INSTRUCTOR)

Email daveja@cod.edu (EMAIL IS PREFERRED CONTECT METHOD)

Class – Naperville Center, Room 03B

Office hours: Before and after lecture and lab or by appointment.

**Books: Principles of Anatomy & Physiology, 13th edition. by Tortora & Derrickson
Human Anatomy & Physiology Laboratory Manual, 9th edition, main version
by Marieb.**

For other books and supplies if you need any guidance, please contact me

Catalog Description

First semester of two-semesters is a sequence dealing with the structure and function of the human body and mechanisms for maintaining homeostasis within it. It includes the study of cells, tissues, and the integumentary, skeletal, muscular and nervous systems. Course is intended to be an alternative to Anatomy and Physiology 1571; credit toward graduation will be granted for Anatomy and Physiology 1551 or Anatomy and Physiology 1571 but not for both. Biology 1151 is strongly recommended.

Objectives/Goals

Upon successful completion of this course, the student should be able to do the following:

- 1. Explain the structure and function of the human body, viewing it from the molecular level to the level of an integrated organism**
 - 2. Interpret relationships between mechanisms of homeostasis and stressors, which cause the body to depart from it**
 - 3. Identify anatomical structures on models**
- Interpret data demonstrating physiological principles**

Topical Outline

This course will include but not be restricted to the following topics:

- 1. Body plan and organization**

- a. **Anatomical position**
 - b. **Body planes and sections**
 - c. **Body cavities and regions**
 - d. **Directional terms**
 - e. **Basic terminology**
 - f. **Levels of organization**
 - g. **Survey of body systems**
2. **Homeostasis**
 - a. **Negative feedback**
 - b. **Positive feedback**
 - c. **Homeostatic mechanisms**
 - d. **Control systems**
3. **Chemistry and cell biology review**
 - a. **Atoms and molecules**
 - b. **Chemical bonding**
 - c. **Inorganic compounds/solutions (including pH)**
 - d. **Organic compounds**
 - e. **Energy transfer using ATP**
 - f. **Intracellular organization of the nucleus and cytoplasm**
 - g. **Membrane structure and function**
 - h. **Mechanisms for movement of materials across cellular membranes**
 - i. **Organelles**
 - j. **Protein synthesis**
 - k. **Cellular respiration (introduction)**
 - l. **Somatic cell division**
4. **Histology**
 - a. **Microscopic anatomy, location, and functional roles of basic tissue types**
 - b. **Membranes (mucous, serous, and synovial)**
5. **Integumentary system**
 - a. **General functions of skin**
 - b. **Gross and microscopic anatomy of skin and accessory structures**
 - c. **Roles of specific tissue layers of skin**
 - d. **Roles of accessory structures**
6. **Skeletal system**
 - a. **General functions of bones and the skeletal system**
 - b. **Histology and structure of a typical bone**
 - c. **Physiology of bone formation, growth, remodeling, and repair**
 - d. **Names and markings of bones**
 - e. **Organization of the skeleton**
 - f. **Structure and function of joints**
 - g. **Classification of joints**
 - h. **Movement of joints**
7. **Muscular system**
 - a. **General functions of muscle tissue**
 - b. **Identification, general location, and comparative characteristics of skeletal, smooth, and cardiac muscle tissue.**
 - c. **Detailed gross and microscopic anatomy of skeletal muscle**
 - d. **Physiology of skeletal muscle contraction**
 - e. **Skeletal muscle metabolism**
 - f. **Principles and types of whole muscle contraction**
 - g. **Nomenclature of skeletal muscles**

- h. **Group actions of skeletal muscle (prime movers, synergists, etc.)**
- i. **Location and function of the major skeletal muscles**
- 8. **Nervous system**
 - a. **General functions of the nervous system**
 - b. **Organization of the nervous system from both anatomical and functional perspectives**
 - c. **Gross and microscopic anatomy of nervous tissue**
 - d. **Neurophysiology (resting membrane potential, production of action potentials, and impulse transmission)**
 - e. **Neurotransmitters and their roles in synaptic transmission**
 - f. **Sensory receptors and their physiological roles**
 - g. **Division, origin, and function of component structures of the brain**
 - h. **Protective roles of the cranial bones, meninges, and cerebrospinal fluid**
 - i. **Structure and function of cranial nerves**
 - j. **Structure and function of spinal cord and spinal nerves**
 - k. **Reflexes and their roles in nervous system function**
 - l. **Physiology of sensory and motor pathways in the brain and spinal cord**
 - m. **Functions of the autonomic nervous system**
 - n. **Comparison of the somatic and autonomic nervous systems**
- 9. **Special senses**
 - a. **Gross and microscopic anatomy of the eye and ear**
 - b. **Roles of specific components of the eye in vision**
 - c. **Roles of specific components of the ear in hearing and equilibrium**

Olfactory and gustatory receptors and their roles in olfaction and taste, respectively

1. Please read this carefully and if you have any questions, please do not hesitate to ask. I suggest that you read this again and again as the semester proceeds.

2. This is a tentative schedule and is likely to change.

3. Attendance & promptness: are expected. More than three absences will mean that you will be dropped from the class. Late arrival for more than three times will mean three absences and you will be dropped. If you are absent, with a reason, you will have to produce the proof, like doctor's note. Towards the end of the semester, if you are absent more than three times or late for three times, you will be dropped one grade.

In case of your absence, you will have to find out from other students for all the information and material.

4. You are expected to come prepared for the lecture for better understanding of the subject.

5. Please note that you will not be allowed to leave the lab before time. If you will leave the lab under any circumstances, you will be considered absent.

6. No food or drinks are allowed in the lab. Anyone found eating or drinking in the class will be asked to leave the class. You will be allowed to go out of the class for a

short break in case the duration of the class is more than 1 hr.

Tests: You will be given a sheet which you will keep with you and note down your points earned. This will give you continuous feed back where you stand so far in the semester.

Lect exam and Lab exams will be given as per the schedule. The points will vary depending upon the length of the chapter. You will be given instructions about the exams in the class.

No makeup exam will be provided for the final exam or any of the laboratory

practical exams. If you miss **one of the lecture tests**, you must inform the instructor before the schedule day of the exam to schedule a make-up exam. **Five-percentage points will be**

automatically deducted from the score of a student's exam. Make-up exams may be of a different format (such as short answer and/or essay) than exam administered in class. Cheating on exam will lead to grade zero for that exam and a possible grade of "F" for that course.

Additional quizzes and assignments may be included at the instructor's discretion and will be factored into the total points for this course.

Quizzes-There will be some quizzes during this course, depending upon the time. If you miss the quiz, no makeup quiz will be given, unless you have a proof your absence with a legitimate reason like illness.

Lab worksheets: The lab exercise and review sheets for each exercise in the lab manual will serve as lab report. Lab reports will be due at the end of each lab session. You must attend each lab in order to receive credit for the lab report. If you miss a lab you will not be given credit for that lab. You will not receive credit for late lab report. You are responsible for bringing your lab book, keep it well and then show me at whenever it is asked. If you have done the lab book prior to coming to the class, you are still expected to stay in the lab till the end. Any activities other than pertaining to the lab are not allowed and may result in the student getting negative points. You must have complete lab book at the end of the semester to get your final grade.

Homework: Will be given from time to time. I will tell you each time how many points it is worth. Late submission is not allowed. Even if you have a good reason for late submission, only 50% of marks will be given at the most.

Cell phones must not be brought to either lect or lab. Use of Cell phone is totally prohibited. No electronics are allowed in the lab or the lecture classes. If you want to bring your laptop, you must take prior permission. Only subject related work is allowed on the laptops.

Academic Honesty: It is very important that you do not look in the work of other students. Cheating is not allowed. Please refer to the College of DuPage policy for specifics.

Attendance & promptness: are expected

Talking, bad behavior and uncleanliness will lower your grade.

Food and drinks are not allowed in the class.

In the lab, you are expected to wear proper covering clothes and shoes.

Clean-up: of your work area in the lab and putting materials away

Grades:

(90% and above)	A
(80% -89%)	B
(70%-79%)	C
(60%-69%)	D/Pass
(0-59%)	F

Lecture Exam I	50	
Lecture Exam-II	50	
Lab Exam-I	20	
Lecture Exam-III	50	
Lab exam II	20	
Lecture Exam-IV	50	
Lab exam III	50	
Lecture exam V	50	
Lab Exam IV	50	
Lecture exam VI	50	
Take home test	30	
Final Lab	100	
Final Lecture	50	
Quizzes each 10 points Total 10	100	
Homework each 10 points, total 5	50	
Extra credit each 5 points total 5 to 10		
Attendance and lab book	30	
Tentative total points	880 to 900	

Please note that points may vary depending upon the material and chapters covered. Number of quizzes may vary too and hence the points may vary. This is tentative only and it is likely to change. I will inform you regarding the total number of points in the exam before the exams. You keep note of points and also points you have earned in the grade sheet given to you.

Course withdrawal: To withdraw from this course, you must go to the Registration Office & withdraw prior to the withdrawal deadline. Failure to follow the correct procedure will result in a grade of “F” for the course. PLEASE MAKE SURE THAT YOU UNDERSTAND THIS CLEARLY TO AVOID ANY PROBLEMS. **Last day for a student’s withdrawal is Tuesday,11/19/13.** Please check with the registration office.

This syllabus and class schedule is also available on line for you to read again and clear your doubts.

Thank you for your co-operation and understanding.

Dr.Mrs Jagruti Jaimini Dave. Part-time faculty College of DuPage

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Tentative course schedule

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W K	Mon	Topics of Lecture	Detail of lab work	Wed	Topics of Lecture	Detail of lab work
1.	08/26/13	Introduction of class Ch. 1 Human body	Use of Microscope Lab: Ex. 1,2 & 3	08/28/13	Ch. 2 Chemical level	Lab: Finish lab book
2.	09/02/13	No class Labor day		09/04/13	Exam 1: Ch 1 Ch.3. Cellular level of organization	Lab Exam:1 Lab Ex 1,2 &3 Lab: Ex. 4 & 5 Cell & Transport
3.	09/09/13	Ch.3. Cellular level of organization	Lab: Ex. 4 & 5 Cell & Transport	09/11/13	Exam-II.Ch 2 to 3 Ch 4. Tissues Epithelial tissue	Lab:Ex 6 Identification of tissues- Epithelial tissue
4.	09/16/13	Ch.4. Tissues Connective tissue, Muscle and nervous tissue.	Lab:Ex 6 Tissues. Connective tissue	09/18/13	Ch 5. Integumentary system	Lab Ex 7. Integu.sys. Lab Ex.8 Coverings
5.	09/23/13	Exam III Ch 4&5 Ch.6 Skeletal system Introduction of Bone structure.	Lab Exam 2 LabEx.9.Bone, Microscopic & Various types of bones.	09/25/13	Ch 7 The skeletal Sys. Axial skeleton	Quiz-Lab-Ex.9 Lab.Ex.10. The skeletal sys. Axial skeleton
6.	09/30/13	Ch 7 The skeletal Sys. Axial skeleton	Lab. Ex.10 Axial skeleton	10/02/13	Ch 8. The skeleton. Appendicular skeleton.	Quiz-Lab Ex.10 Lab.Ex.11.The Appendicular skeleton.
7.	10/07/13	Ch 8. The skeleton. Appendicular skeleton. Ch.9.Joints.	Quiz-Lab.Ex.11 Lab. Ex: 10,11,12&13	10/09/13	Exam IV Ch 6 to 9 Ch.10.Muscular tissue Please bring the highlighters	Lab Exam 3 Ex 9 to 13 Lab.Ex: 14 Ske.Muscle Histology

8.	10/14/13	Ch.10.Muscular tissue Please bring the highlighters.	Lab.Ex: 14 Ske.Muscle Histology	10/16/13	Ch.10.Muscular tissue Please bring the highlighters.	Quiz Lab Ex 14 Lab Ex: 15 Muscles of Head and neck
9.	10/21/13	Ch 11 Muscular system Please bring the highlighters.	Quiz Lab Ex 15 Head & neck. Lab Ex 15: Muscles of Thorax, Shoulder and Abdominal wall Muscles of Back Muscles of Upper arm	10/23/13	Ch 11 Muscular system Please bring the highlighters.	Quiz Lab 15 Thorex & Abd wall & Upper arm. Lab.Ex.15. Muscles of lower limbs.
10.	10/28/13	Ch 11 Muscular system	Quiz Lab Ex 15 Lower limb Revision and check the lab book and other work	10/30/13	Exam V Ch 10&11 Ch 12. Nervous Tissue	Lab Exam: 4 Lab Ex 14&15 Lab.Ex.17 Nervous Tissue
11.	11/04/13	Ch 12. Nervous Tissue	Lab.Ex.17 Nervous Tissue	11/06/13	Ch 12. Nervous Tissue Lect. Ch 14 The brain & cranial nerves	Quiz Lab Ex 17 Lab.Ex.19 Brain
12.	11/11/13	Lect. Ch 14 The brain & cranial nerves	Lab.Ex.19. Brain and Cranial nerves.	11/13/13	Lect. Ch 14 The brain & cranial nerves	Lab.Ex.19. Brain and Cranial nerves. Ch 15 ANS
13.	11/18/13	Ch 17. Special senses Eye	Quiz Lab Ex 19 Lab Ex 24	11/20/13	Ch 17. Special senses Ear and others	Lab Ex 25
14.	11/25/13	Ch 17 Special senses	Finish the lab Book. Take home test	11/27/13	Thanks Giving holidays	Prepare for exam Finish lab book
15.	11/02/13	Ch. 13 Spinal cord and Spinal nerves	Quiz Lab 24&25 Special senses Lab.Ex21Spinal cord, Spinal nerves &ANS.	11/04/13	Ch 16 PNS sensory, motor and integrative sys.	
16.	12/09/13	Ch 15 ANS Review for Final Lab Exam		12/11/13	No Lecture	Final Lab exam. Lab. Ex.17,19, 21,22 24 & 25.

17.	12/16/13	Exam.VI.ch.12 ,13,14 ,15 & 17 Final lecture exam Time-8.am.- 9.50am	No Lab.			
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