College Of DuPage

Anatomy & Physiology II 1552-003

Lecture/Discussion Tue. Thus 09.30AM to 10.45AM HSC 2324
Lab/ Discussion Monday 08.00 AM to 10.50AM. HSC 2303
From 01/16/14 to 05/16/14

Tentative course syllabus

Dr.Mrs.Jagruti J.Dave. **Spring-2014---16 week course**
Office: Part-time Faculty Center at Health and Science Building.
Phone- Voice mail (630)-942-2800-ext51953.
Health science Division office HSC 1220 Phone no (630)-942-8331.Then ask for part-time faculty
(USE EMAIL AS CONTECT WITH INSTRUCTOR)
Email daveja@cod.edu (EMAIL IS PREFERRED CONTECT METHOD)

Office hours: Before and after lecture and lab or by appointment
Class: Lecture HSC 2324 Lab HSC 2303

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

Course Description.
Continuation of the study of the structure and function of the human body and the mechanisms for maintaining homeostasis within it. The endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems, as well as the concepts of development, metabolism, fluid and electrolyte balance, and acid-base balance are included. It will also include identifying anatomical structures of models and posters in the laboratory.

Course is intended to be an alternative to Anatomy and Physiology 1572; credit toward graduation will be granted for Anatomy and Physiology 1552 or Anatomy and Physiology 1572 but not for both.

Prerequisite: Anatomy and Physiology 1551 or 1571, with a grade of "C" or better. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

General course objectives: with the topic outlines.

Upon successful completion of the 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
4. Interpret data demonstrating physiological principles

B. Topical Outline:

1. Endocrine system
    a. General functions of the endocrine system
    b. Definition and chemical classification of hormones
    c. Control of hormone secretion
    d. Mechanisms of hormone actions at effectors
    e. Role of the hypothalamus and pituitary gland
    f. Identity, secretory control, and functional roles of the major hormones of the pituitary gland, adrenal gland, thyroid gland, parathyroid gland, pineal gland, pancreas and gonads
    g. Functions of hormones secreted by other endocrine tissues and cells, such as erythropoietin, thymosin, digestive hormones, etc.
    h. Hormonal response to stress

2. Cardiovascular system
    a. General functions of the cardiovascular system
    b. Formation, composition, and function of blood plasma
    c. Identity, microscopic anatomy, concentrations, formation, and functional roles of the formed elements of the blood
    d. Hemostasis, including coagulation of the blood
    e. ABO and Rh blood grouping
    f. Gross and microscopic anatomy of the heart, including the conduction system
    g. Physiology of cardiac muscle contraction
    h. Pattern of blood flow between heart chambers and between the heart and major vessels leading directly to or from the heart
    i. Cardiac cycle, including basic rhythm of heartbeat, pressure and volume changes, heart sounds, and electrocardiogram
    j. Regulation of stroke volume and heart rate
    k. Anatomy and functional roles of the different types of blood vessels
    l. Pattern of blood circulation throughout the body, including systemic, pulmonary, coronary, hepatic portal, and fetal circulation
    m. Blood pressure and its functional interrelationships with cardiac output, peripheral resistance, and hemodynamics
3. Lymphatic system
    a. General functions of the lymphatic system
    b. Gross and microscopic anatomy of the lymphatic system, including the pattern of lymph circulation
    c. Lymph formation and flow mechanisms

   d. Nonspecific resistance to disease and the inflammatory response
   e. Antibody-mediated (humoral) immune response
   f. Cell-mediated immune response
   g. Roles of B cells and T cells in immune response
4. Respiratory system
   a. General functions of the respiratory system
   b. Gross and microscopic anatomy of the respiratory tract and related organs
   c. Mechanism of pulmonary ventilation
   d. Pulmonary air volumes and capacities
   e. Mechanism of gas exchange in lungs and tissues
   f. Mechanisms of gas transport in the blood
   g. Control of pulmonary ventilation
5. Digestive system and metabolism
   a. General functions of the digestive system
   b. Gross and microscopic anatomy of the gastrointestinal tract and the accessory organs of digestion
   c. Mechanical and chemical processes of digestion and absorption
   d. Processes of excretion and elimination
   e. Hormonal and neural regulation of digestive processes
   f. Nutrition and metabolism
   g. Cellular respiration
   h. Catabolism and anabolism of carbohydrates, lipids, and proteins
   i. Metabolic roles of specific tissues and organs, including the liver, adipose tissue, and skeletal muscle
   j. Hormonal and neural regulation of metabolism
   k. Energy balance, metabolic rate, and thermoregulation
6. Urinary system
   a. General functions of the urinary system
   b. Gross and microscopic anatomy of the urinary tract, including detailed histology of the nephron
   c. Functional processes of urine formation, including filtration, reabsorption, secretion, and excretion
   d. Factors regulating and altering urine volume and composition, including the renin-angiotensin system and the roles of aldosterone and antidiuretic hormone
   e. Endocrine activities of the kidneys, such as vitamin D activation and secretion of erythropoietin
   f. Innervation and control of the urinary bladder
7. Fluid/electrolyte and acid/base balance
   a. Regulation of water intake and output
   b. Description of the major fluid compartments, including intracellular, extracellular, intravascular, and interstitial
   c. Volume and chemical composition of major compartments fluids

d. Movements between the major fluid compartments, causal forces, volumes, and electrolyte balance
e. Buffer systems and their roles in acid/base balance
f. Role of the respiratory system in acid/base balance
g. Role of the urinary system in acid/base balance

8. Reproductive systems and development
   a. General functions of the reproductive systems
   b. Gross and microscopic anatomy of the male and female reproductive tracts and external genitalia
   c. Reproductive cell division (meiosis, gametogenesis, folliculogenesis)
   d. Specific roles of the ovaries, uterine tubes, uterus, and vagina
   e. Specific roles of the testes, epididymis, ductus deferens, seminal vesicles, prostate, bulbourethral glands, and urethra
   f. Regulation of reproductive functions, including puberty, the female reproductive cycle, spermatogenesis, and the climacteric
   g. Development of the embryo/fetus and the hormonal changes during pregnancy
   h. Labor/parturition
   i. Mammary gland anatomy and physiology
   j. Sex determination and introductory human genetics

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 (without the proof of legitimate absence) will mean that you will be dropped from the class or dropped one grade whichever is applicable. Late arrival for more than three times (without the proof of legitimate reason) will mean three absences and you will be dropped one grade. If you are absent, with a reason, you will have to produce the proof, like doctor's note. Towards the end of the semester, all the absences, late arrivals and early leaving the classes will be taken into considerations towards the final grading. For these students, I will decide, between dropping the grade and not adding any extra credit points.

In case of your absence, you will have to find out from other students for all the information and material. Please do not write to me e-mails asking about missed class informations.

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 feedback 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: Lab manual is necessary to pass the class. 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.1.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.
Attendance & promptness: are expected
Talking, bad behavior and uncleanliness will lower your grade
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
Food and drinks are not permitted in lab.

Cell phones must not be brought to either lect or lab. Use of Cell phone is totally prohibited. Cell phones should not be kept on the desk or nearby. 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.

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

Details of exams.

Lect.Ex.I	Ch.19.Blood	50	Ex.VI Take home	Ch.25.Meta&Nutri	25
Lab.Ex.I		25			
			Lect.Ex.VII	Ch. 18.Endocrine	50
Lect.Ex.II	HT&BV.Ch.20, 21	100	Lab. EX.V	Ch. 18.Endocrine	20
Lab.Ex.II		50	Homework		10
Lect.Ex.III	Lymph.Ch. 22	30	Lect. Ex.VIII	Ch.26. Uri.Sys.	50
			Lab.Ex.VI		50
Lect.ExIV	Resp.sys. Ch.23	60			
Lab.Ex.III	Resp.sys. Ch.23	50	Lect ex.IX Take home	Ch. 27 Fluid and eletrolytes	30
			Final Lab VI	Ch. 28,29	50
			Final Lect.X	Ch. 28,29	100
Lect. Ex.V	Dig. Sys. Ch. 24	60			
Lab. Ex.IV	Dig.sys Ch. 24	50	Attend.+Lab		10
			Quiz each-20	20 X 6 =	120

Total points(Tentative) = 990

LAB BOOK-TOTAL NUM. 8X5= 40
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: The last day to withdraw from this class is 04/17/14.After that date, students may file a Petition for Late withdrawal through the registration office. Petition for late Withdrawal will be granted for extenuating circumstances only, including student illness, death in the immediate family, family emergencies, call to active duty, or other appropriate extenuating circumstances. The student will be required to provide appropriate documentation for all requests for Late withdrawal. Prior to withdrawing from this class, students are encouraged to speak with the instructor.
Policy for Incomplete: If you do not finish the class due to the reasons like student illness, death in the immediate family, family emergencies, call to active duty, or other appropriate extenuating circumstances, you may request for incomplete grade and then you may register for the next semester to complete the course. If I am not informed about the circumstances, the reason for not completing with the legitimate proof, Incomplete grade will not be given.

Failure to follow the correct procedure will result in the grade of "F" for the course. Please check with the registration office for the detailed procedure and rules.

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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Date	Monday LAB	Date	Tuesday	Date	Thursday
				01/16	Introduction Ch. 19. Blood Lab instructions.
01/20	HOLIDAY	01/21	Ch. 19 Blood	01/23	Ch. 20. Heart
01/27	Lab book Ch. 19 Blood Grouping and Cross matching. Ch. 20. Heart	01/28	Exam I Lect Ch. 19 Blood Ch. 20. Heart	01/30	Ch. 20. Heart
02/03	Lab Exam I Ch. 19 Blood Ch. 20 Heart	02/04	Ch. 21 Blood vessels.	02/06	Ch. 21 Blood vessels.
02/10	Quiz Heart Ch. 21 Blood vessels.	02/11	Ch. 21 Blood vessels.	02/13	Exam II Lect Ch. 20 and 21 Ch. 22 Lym. Immu.
02/17	Lab Exam II Ch. 20 and 21. Ch. 22.Lym.Immu	02/18	Exam III Ch. 22. Intro. to Ch. 23 Respiratory sys.	02/20	Ch. 23. Resp Sys.
02/24	Ch. 23. Resp sys.Anatomy	02/25	Ch. 23. Resp Sys.	02/27	Ch. 23. Resp Sys.
03/03	Quiz Resp sys Ch. 23. Anatomy Physio-Ex	03/04	Ch. 23. Resp.sys	03/06	Exam IV Ch. 23. Resp.sys
03/10	Lab Exam III Ch. 23 Resp Sys. Ch. 24. Dig.Sys.	03/11	Ch. 24 Dig,Sys Home work Dig sys (For Monday batch only)	03/13	IN SERVICE DAY NO CLASS
03/17	Quiz Dig.sys. Lab Ch. 24 Dig.sys	03/18	Ch. 24 Dig,Sys	03/20	Ch. 24 Dig,Sys

03/24	Lab Exam IV Dig. Sys Ch. 25.Metabolism and Nutrition	03/25	Lect Exam V Ch. 24 Dig sys	03/27	Ch. 18 Endocrine Take home test. Ex VI Ch.25 Home work Endocrine Late return will not be accepted.
03/31	Spring break	04/01	Spring break	04/03	Spring break
04/07	Ch. 18 Endocrine system Bring the homework. Late return will not be accepted.	04/08	Ch. 18 Endocrine system Ch. 26 Uri.Sys	04/10	ExVII.Lect& Lab.Ex V Endo Ch. 26 Uri.Sys
04/14	Quiz Uri. Sys Anatomy Ch. 26. Urinary sys	04/15	Ch. 26. Urinary sys	04/17	Ch. 26. Urinary sys
04/21	Ex. VIII Ch. 26 Uri. Sys. Lab Ex. VI Ch. 27. Fluid and Electrolytes.	04/22	Ch. 28.Male repro.sys Take home test Ex.IX Ch. 27 Fluids and Electrolytes. Due on Monday 04/28/14	04/24	Ch. 28.Male repro.sys
04/28	Ch. 28. Male repro. sys Female repro. sys	04/29	Ch. 28. Male repro.sys	05/01	Ch. 28.Female repro.sys
05/05	Lab Final Ch. 28, 29	05/06	Ch. 28.Female repro.sys	05/08	Ch. 28.Female repro.sys
05/12	No Lab Final exam Week	05/13	Review	05/15	Final exam Ch 28, 29