

Bio 2430 . 252 Human Physiology and Anatomy Spring 2008
TH 9.30 - 10.45 am NSB 116

Instructor: Dr. T. Prabhakaran
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Office Hrs: MW 10.00 - 11.30 TH 11 – 12.30 pm

Text book: Anatomy and Physiology by Elaine Marieb and Katja Hoehn 2008, 3rd edition (Benjamin Cummings)

Lab manual : Human Anatomy and Physiology Laboratory Manual, (Cat version) Marieb and Mitchell 2008 9th edition

Course Objectives: This course is intended to give you a basic understanding of the structure and function of the human body. Each tissue or organ is specialized to perform a specific function and a major part of this course is directed towards the study of the relationship between the structure and function of an organ or an organ system. The focal point in the entire course will be how the human body maintains homeostasis or 'an almost unchanging internal environment ' within the body, and what happens when this homeostasis is disturbed. Time limitation necessitates curtailing the scope of lectures on many topics. I urge you to read the text book as often as possible to supplement and enhance the information you get from lectures. A guideline for your reading is given in the lecture schedule.

Lab is an integral part of this course. Your active involvement and sustained interest in the lab work will not only give you 25% of the total grade, but also will improve your performance in the class exams.

Exams and the grading system:

1. There will be **three class exams** as indicated in the lecture schedule. These exams will make up 50% of the overall course grade. Each exam will consist of a mixture of question types (multiple choice, matching, labeling etc.). Scantrons for the tests will be provided by the Biology Department.
2. No make-up exam will be given to you unless you provide documentary evidence to confirm the unavoidable circumstance that made you miss the exam.
3. The final is worth 25% of the total points. This is a comprehensive test, more than half of which will consist of questions from the three previous class exams.
4. Lab practicals and quizzes will make up 25 % of the total points
5. Final grade will be based on a percentage scale of the total points as follows:

90 - 100	.. A
80 - 89.9	-- B
70 - 79.9	-- C

60 - 69.9 -- D
Below 59.9 -- F

If you are found "cheating " either in the lecture exams or during lab tests, disciplinary actions will be taken against you and you will be reported to the Departmental Chair.

Attendance policy: Your attendance in class and in the lab is monitored. Your grade will be affected if you miss the lab or the lecture, especially when your final average is borderline. If you have a perfect or near-perfect attendance, and your final class average for example, is 88.5%, then you will be given 'A' instead of 'B' as your course grade. If you have **6 or more unexcused absences** from the **lecture** classes, or **3 or more unexcused** absences from the **lab** sessions, you will **fail the course** regardless of the grades you get in the lecture and lab tests. Please put your initials against your name in one of the class rosters that I will circulate at the start of each class. If after signing, you leave the class before the appointed time, I will consider it an act of cheating, and I will initiate appropriate disciplinary action against you.

If you decide to withdraw from the course after 3/10/08, please see me before you stop attending the classes, and make sure you complete the withdrawal procedure by calling CATS. Your last withdrawal date is 4/8/08.

Biology 2430. 251 Lecture Schedule
Spring 2008 MW 12.30 – 1.45 pm NSB 116

Day/date	Topics	Reading
T 1/15	Intro. Complementarity of structure and function; Structural organization; Homeostasis. Anatomical terms Additional reading	1 - 19 39 - 54
Th 1/17	Cellular functions; Tissues: Epithelial, Connective Covering and lining membranes	92 - 98 108- 129 131- 133
T 1/22	MLK Holiday	
Th 1/24	Integumenatary system	138 - 154
T 1/29	Bones and bone tissues; structure and composition.	156 - 164
Th 1/31	Bone growth. Bone homeostasis; Bone repair.	164 - 174

T	2/5	The skeleton: Axial and appendicular. Joints and joint disorders	177 - 220 223 - 245
Th	2/7	Exam 1	
T	2/12	Muscle characteristics and functions; Skeletal muscles	247 - 254
Th	2/14	Contractions of skeletal muscles.	255 - 274
T	2/19	Smooth muscles. Major skeletal muscles	275 - 283 285 - 343
Th	2/21	Nervous system; Neurons and Neuroglia	347 - 355
T	2/26	Reflex arc. Synapse. Action potential	356 - 372
Th	2/28	Central nervous system. Brain	386 - 424
T	3/4	Spinal cord. Peripheral nervous system Autonomic nervous system.	425 - 430 504 - 510 514 - 524
Th	3/6	Exam 2	
Spring break			
T	3/18	Endocrine system	533 - 551
Th	3/20	Endocrine system, continued	552 - 564
T	3/25	Blood system: function; components	568 - 584
Th	3/27	Hemostasis and clotting disorders	585 - 593
T	4/1	Cardiovascular system. Heart, structure and function. Cardiac muscles	596 - 609
Th	4/3	ECG; Cardiac cycle and cardiac output	610 - 623
T	4/8	Blood vessels. Physiology of circulation. Lymphatic system	626- 645 655 - 676 680 - 688
Th	4/10	Exam 3	

T	4/15	Respiratory system		729 - 7700
Th	4/17	Functions of liver Urinary system. Nephrons. Kidney physiology		853 - 856 876 - 893
T	4/22	Body fluids. Acid base balance		908 - 915 992 - 929
Th	4/24	Reproduction and development Fetal circulation, Teratogens	Lab manual	932 - 967 654 - 658 482 - 483
Th	5/1	Final 11 - 1.30 pm		