

Applied Cardiovascular Physiology (BME 698) – Fall 2007

Lectures: Monday 1-3:55pm, 698 Fenster Hall

Instructor: Dr. Susan Herz (SLH2002@columbia.edu)

Office Hours: Monday 12-1pm

Course Description: Introduction to the anatomy, physiology and pathophysiology of the cardiovascular system including current techniques for measuring cardiac function. Topics covered include: cardiac physiology, anatomy, blood pressure, electrical activation, coronary circulation, cardiac imaging and devices.

Grading: 20% Homework
20% Midterm Exam I
20% Midterm Exam II
10% Presentations
30% Final Exam

Homework Policy: Homework is due at the beginning of class on the due date. Late homework will not be accepted, because we will go over the homework on the due date. Please make a photocopy of your homework if you would like to use it to study for the midterm. You may discuss the homework with other students (do not copy), but you must complete and turn in your own work.

Recommended Text: WF Boron and EL Boulpaep, *Medical Physiology*. 2003. (Available at the UMDNJ Library).

Lecture #	Date	Topic	Reading	Homework
1	9/10	Introduction to Course, Muscle Physiology		
2	9/17	Cardiovascular Anatomy, Blood Pressure, Stress in Artery/Heart	p. 423-440, p. 447-462	
3	9/24	Heart as a Pump	p. 509-533	HW 1 Assigned
4	10/1	Measurement of Cardiac Output	p. 441-444 + TBD	
5	10/8	Electrical Activation of the Heart and EKGs	p. 483-506	HW 1 Due
6	10/15	Midterm I		
7	10/22	Analysis of Experimental Measurements		HW 2 Assigned
8	10/29	Cardiovascular Ultrasound	TBD	
9	11/5	Coronary Anatomy and Disease	TBD	HW 2 Due
10	11/12	Midterm II		
11	11/19	Cardiac MRI, finalize presentation topics	TBD	
12	11/26	Cardiac Medical Devices	TBD	
13	12/3	Presentations/ Final exam review		
14	12/10	Final Exam		