

**INTD 562 - Systems Physiology and Disease – Muscle, Respiratory, Cardiovascular and Renal. Mondays and Thursdays 1-3:00**

*This course is one of the 2 core classes for the Interdepartmental Systems Biology and Disease PhD program*

	<b>DATE/TIME</b>	<b>SECTION</b>	<b>LECTURER</b>	<b>TOPIC</b>
1	Aug 22 /1-3:00	<b>Muscle</b>	RA Farley, PHBI rfarley@usc.edu	Muscle Basics
2	Aug 25 /1-3:00		M Snow, CNB mikelhes@usc.edu	Satellite cells during muscle growth and regeneration
3	Aug 29 /1-3:00		ZZ Wang, CNB zzwang@usc.edu	Neuromuscular transmission Neuromuscular diseases
4	Sept 1 / 1-3:00		T. Schroeder, Biokinesiology&PT eschroed@usc.edu	Muscle Mechanics and Training
5	Sept 8 / 1-3:00	<b>Respiratory</b>	T.Keens, CHLA tkeens@chla.usc.edu	Diffusion and Gas Exchange
6	Sept 12/1-3:00-		T.Keens, CHLA	Gas Exchange, V/Q, Mechanics
7	Sept 15 /1-3:00		T.Keens, CHLA	Mechanics, Pulmonary circulation, Host defense
8	Sept 19 /1-3:00		R. Lubman, Medicine rlubman@usc.edu	Stem Cells/Lung Disease Alveolar transport
9	Sept 22 /1-3:00		T. Keens, CHLA	Control of Breathing Resp. Research CHLA
<b>10</b>	<b>SEPT 26 EXAM 1</b>			
11	Sept 29 /1-3:00	<b>Cardio-vascular</b>	R. Farley, PHBI rfarley@usc.edu	Cardiac Excitability & EC Coupling
12	Oct 3 /1-3:00		H. Meiselman, PHBI meiselma@usc.edu	Physical Principles Cardiac Cycle
13	Oct 6 /1-3:00		H. Meiselman, PHBI	Cardiac Mechanics
14	Oct 10 /1-3:00		H. Meiselman, PHBI	CV Control
15	Oct 13 /1-3:00		CVR Brown, Medicine	CV response to hemorrhage
16	Oct 17 /1-3:00		H Meiselman, PHBI	Microcirculation
17	Oct 20 /1-3:00		J C. Wood, CHLA jwood@usc.edu	Fetal circulation Congenital heart defects
18	Oct 24 /1-2:00 2:00-3:00		F. Hofman hofman@usc.edu Team taught	Angiogenesis Physiology Lab, & Q-A
<b>19</b>	<b>OCT 27 EXAM 2</b>			

## INTD 562 - Systems Physiology and Disease –continued

20	Oct 31 /1-3:00	<b>Fluid &amp; Elec. Renal</b>	J. Peti Peterdi, PHBI petipete@usc.edu	Introduction to Kidney Structure and Function Visualize kidney with imaging techniques, compare and contrast kidney in normals and patients with diabetes mellitus
21	Nov 3 /1-3:00		AS Yu, Medicine alanyu@usc.edu	Glomerular Function and Disease Focus on cell biology of the podocyte and genetic causes of proteinuria
22	Nov 7 /1-3:00		A. Mircheff, PHBI amirchef@usc.edu	Salt and Nutrient Absorption in the GI Tract Introduction to epithelial transport physiology, as applied to gastrointestinal absorption
23	Nov 10 /1-3:00			ASN meeting – maybe no class
24	Nov 14 /1-3:00		A. McDonough, PHBI mcdonoug@usc.edu	Sodium Transport and Hypertension Focus on control of extracellular fluid volume and how disorders in this can cause hypertension
25	Nov 17 /1-3:00		A. Yu, Medicine alanyu@usc.edu	Water Transport and Diabetes Insipidus Renal concentrating and diluting mechanisms, aquaporin biology and role of vasopressin
26	Nov 21 /1-2:00		J. Peti-Peterdi, PHBI petipete@usc.edu	Renal Vasculature, Regulation and Tubuloglomerular Feedback <i>Paper for discussion:</i> He et al., Citric acid cycle intermediates as ligands for orphan G-protein-coupled receptors. Nature. 2004; 429:188-93.
	2-3:00		M. Nadim, Medicine <a href="mailto:nadim@usc.edu">nadim@usc.edu</a>	Renovascular hypertension
27	Nov 28/1-3:00		McDonough, Meiselman, Lubman	Congestive Heart Failure Integrate discussion of cardiac, renal and pulmonary aspects of heart failure <i>Paper for discussion:</i> To be announced Review Q&A
28	Dec 1/11-12:00 <b>different time!!</b>		H. Madkour madkour@usc.edu	Dialysis
	Dec 1 /1-2:00		A. McDonough, PHBI mcdonoug@usc.edu	Acid base homeostasis
<b>EXAM WEEK EXAM 3</b>				