

**CELL AND SYSTEMS PHYSIOLOGY – GS12 0254**  
Spring 2008 Course Schedule

Course Director: Edgar T. Walters, Ph.D.: (X-6314, MSB 4.116, [Edgar.T.Walters@uth.tmc.edu](mailto:Edgar.T.Walters@uth.tmc.edu))  
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Times: Tuesdays and Thursdays, 1:00-3:00 PM

Room: MSB 4.100

<b>DATE</b>	<b>TITLE</b>	<b>LECTURER</b>
<b>I. CELL PHYSIOLOGY</b>		
Tu 8 January 1:00–3:00 P.M.	<b>INTRODUCTION TO PHYSIOLOGY</b>	Walters
Th 10 January 1:00–3:00 P.M.	<b>CELL MEMBRANE STRUCTURE AND TRANSMEMBRANE TRANSPORT</b>	Jayaraman
Tu 15 January 1:00–3:00 P.M.	<b>IONIC EQUILIBRIA AND THE RESTING CELL MEMBRANE POTENTIAL</b>	Jayaraman
Th 17 January 1:00–3:00 P.M.	<b>ACTION POTENTIAL</b>	Kunjilwar
Tu 22 January 1:00–2:00 P.M.	<b>SOLUTE AND WATER TRANSPORT ACROSS EPITHELIA</b>	Dubinsky
2:00–3:00 P.M.	<b>DISCUSSION: PHYSIOLOGICAL DYSFUNCTION</b> Cystic Fibrosis	Dubinsky
<b>II. INTERCELLULAR COMMUNICATION AND COORDINATION</b>		
Th 24 January 1:00–3:00 P.M.	<b>SYNAPTIC TRANSMISSION</b>	Walters
Tu 29 January 1:00–3:00 P.M.	<b>SENSORY PHYSIOLOGY</b>	Walters
Th 31 January 1:00–3:00 P.M.	<b>MOTOR CONTROL AND NEURAL PLASTICITY</b>	Walters
Tu 5 February 1:00–2:00 P.M.	<b>INTRODUCTION TO ENDOCRINE CONTROL</b>	Lichtenberger
2:00–3:00 P.M.	<b>DISCUSSION: PHYSIOLOGICAL DYSFUNCTION</b>	Walters
Th 7 February 1:00–3:00 P.M.	<b>EXAMINATION I</b>	Staff
<b>III. MUSCLE SYSTEMS AND CONTRACTION</b>		
Tu 12 February 1:00–3:00 P.M.	<b>OVERVIEW OF MUSCLE SYSTEM</b> <b>SKELETAL MUSCLE</b>	Weisbrodt

Th 14 February      **CARDIAC AND SMOOTH MUSCLE**      Weisbrodt  
1:00–3:00 P.M.

**IV. THE CARDIOVASCULAR SYSTEM AND REGULATION OF BLOOD FLOW/PRESSURE**

Tu 19 February      **HEMODYNAMICS**      Weisbrodt  
1:00–3:00 P.M.

Th 21 February      **THE CARDIAC PUMP**      Weems  
1:00–3:00 P.M.

Tu 26 February      **CARDIAC OUTPUT**      Weems  
1:00–3:00 P.M.

Th 28 February      **REGULATION OF ARTERIAL PRESSURE AND  
REGIONAL BLOOD FLOW**      Weems  
1:00–3:00 P.M.

Tu 4 March      **CAPILLARY EXCHANGE**      Weisbrodt  
1:00–3:00 P.M.

Th 6 March      **EXAMINATION II**      Staff  
1:00–3:00 P.M.

10–14 March      ***SPRING BREAK!***

**V. THE RENAL SYSTEM AND REGULATION OF FLUID/ELECTROLYTE BALANCE**

Tu 18 March      **ELEMENTS OF RENAL FUNCTION**      O'Neil  
1:00–3:00 P.M.

Th 20 March      **MECHANISMS OF ELECTROLYTE AND WATER TRANSPORT**      O'Neil  
1:00–3:00 P.M.

Tu 25 March      **REGULATION OF FLUID AND ELECTROLYTE BALANCE**      O'Neil  
1:00–3:00 P.M.

Th 27 March      **REGULATION OF POTASSIUM BALANCE**      O'Neil  
1:00–2:00 P.M.

2:00–3:00 P.M.      **DISCUSSION: PHYSIOLOGICAL DYSFUNCTION**      Brown

**VI. THE RESPIRATORY SYSTEM AND REGULATION OF GAS BALANCE**

Tu 1 April      **PULMONARY VENTILATION AND GAS TRANSPORT**      Weisbrodt  
1:00–3:00 P.M.  
Mechanics of ventilation  
Alveolar ventilation

Th 3 April      **CONTROL OF VENTILATION AND REGULATION OF  
O<sub>2</sub> AND CO<sub>2</sub> BALANCE**      Dubinsky  
1:00–3:00 P.M.

Tu 8 April      **EXAMINATION III**      Staff  
1:00–3:00 P.M.

