

SPRING 2018

GENERAL PHYSIOLOGY 5103

Course Co-Directors:

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The course is designed to develop a foundation in human physiology by its focus on the functional activities and control mechanisms of cells, tissues and organs and the integration of organ system to maintain homeostasis. Class lectures are supplemented with discussions of assigned papers as a forum for integrating research findings with basic concepts.

GENERAL INFORMATION:

1. All Classes will be held:

**Monday, Wednesday and Friday
9:00 am – 9:50 am
Conference Room 205/207
Biomedical Research Center One**

2. Six Exams: As Scheduled below from **7:50 am – 9:50 am**

Exam questions are short answer, essay, or multiple choice.

**EXAM #1 - 1/26/2018
EXAM #2 - 2/16/2018
EXAM #3 - 3/07/2018
EXAM #4 - 4/04/2018
EXAM #5 - 4/27/2018
EXAM #6 - 5/14/2018**

3. Textbook: Required textbook is Textbook of Medical Physiology, Guyton and Hall, 13th Edition. Other readings will be assigned by individual Instructors.

5. Grading: Students will be assigned a grade based on exam scores. Each teaching/learning event will have 10 points of exam question(s). Grades will be scaled, with the class average typically set at B.

6. Course Evaluation: The course will be evaluated by the students following UAMS procedures. Each Instructor will be evaluated by the students at the end of the exam covering his/her specific course materials.

General Physiology
Department of Physiology and Biophysics
Biomedical Research Center One – Conference Room 205/207
Lecture Schedule – Spring 2018
9:00 am – 9:50 am

| DATE | LECTURE | INSTRUCTOR |
|-------------|---|----------------------|
| 1/08/18 | Plasma Membrane, Membrane Transport, and Resting Membrane Potential | Dobretsov |
| 1/10/18 | Action Potential, Synaptic Transmission, and Neurotransmission | Dobretsov |
| 1/12/18 | Sensory Physiology | Dobretsov |
| 1/15/18 | Holiday (Martin Luther King, Jr. Day) | |
| 1/17/18 | Bone Biology | Morello |
| 1/19/18 | Skeletal Muscle | Morello |
| 1/22/18 | Smooth Muscle | Morello |
| 1/24/18 | Assigned Special Topics for Discussion | Morello Dobretsov |
| 1/26/18 | EXAM 1 (Biomed I - Room 205/207 7:50 a.m. –9:50 a.m.) Includes 7 learning events by Dobretsov and Morello | 2 hours |
| 1/29/18 | Overview of the Cardiovascular System and Hemodynamics; Electrical Activity of the Heart | Jennings |
| 1/31/18 | Excitation-Contraction Coupling; Normal Electrocardiogram | Jennings |
| 2/02/18 | Heart as a Pump; Cardiac Cycle | Jennings |
| 2/05/18 | Microcirculation; Local and Humoral Control | Jennings |
| 2/07/18 | Neural Control; Blood Pressure Regulation | Jennings |
| 2/09/18 | Cardiac Output, Venous Return | Jennings |
| 2/12/18 | Exercise Muscle Blood Flow and Cardiac Output | Jennings |
| 2/14/18 | Cardiovascular Review | Jennings |
| 2/16/18 | EXAM 2 (Biomed I - Room 205/207 7:50 a.m. –9:50 a.m.) Includes 8 learning events by Jennings | 2 hours |
| 2/19/18 | Holiday (President's Day) | |
| 2/21/18 | Chapter 38, Resp. 1 - Pulmonary Ventilation | Jennings |
| 2/23/18 | Chapter 39, Resp. 2 - Pulmonary Circulation | Chowdhury |
| 2/26/18 | Chapter 40, Resp. 3 - Principles of Gas Exchange | Chowdhury |
| 2/28/18 | Chapter 41, Resp. 4 - Transport of Oxygen and Carbon Dioxide in Blood and Tissue Fluids | Chowdhury |
| 3/02/18 | Chapter 42, Resp. 5 - Regulation of Respiration | Chowdhury |
| 3/05/18 | Review Chapter 43-45 – Resp. in Stressful Environments | Chowdhury |
| 3/07/18 | EXAM 3 (Biomed I - Room 205/207 7:50 a.m. –9:50 a.m.) Includes 6 learning events by Jennings and Chowdhury | 2 hours |

| DATE | LECTURE | INSTRUCTOR |
|---------|---|-----------------|
| 3/09/18 | Kidney Function (I) | Kurten |
| 3/12/18 | Kidney Function (II) | Kurten |
| 3/14/18 | Regulation of Fluid and Electrolyte Balance (I) | Kurten |
| 3/16/18 | Regulation of Fluid and Electrolyte Balance (II) | Kurten |
| | SPRING BREAK 3/19/18 – 3/23/18 | |
| 3/26/18 | Control of Acid-Base Balance by Body Buffers and the Respiratory System | Wight |
| 3/28/18 | Control of Acid-Base Balance by the Renal System | Wight |
| 3/30/18 | Analysis of Acid-Base Disturbances (computer laboratory) | Wight |
| 4/02/18 | Assigned Special Topics for Discussion | Kurten Wight |
| 4/04/18 | EXAM 4 (Biomed I - Room 205/207 7:50 a.m. –9:50 a.m.) Includes 8 learning events by Kurten and Wight | 2 hours |
| 4/06/18 | Research Day 2018 - NO CLASSES OR EXAMS | |
| 4/09/18 | Neurogastroenterology and Gut Motility | FA Simmen |
| 4/11/18 | Gastrointestinal Secretion, Digestion and Absorption | FA Simmen |
| 4/13/18 | Frontiers in Gastroenterology and Hepatology | FA Simmen |
| 4/16/18 | Endocrine Control Mechanisms, Hypothalamus and Pituitary | RCM Simmen |
| 4/18/18 | Female Reproductive System | RCM Simmen |
| 4/20/18 | Male Reproductive System | RCM Simmen |
| 4/23/18 | Fertilization, Pregnancy, and Fetal/Neonatal Physiology | RCM Simmen |
| 4/25/18 | Assigned Special Topics for Discussion | RCM Simmen |
| 4/27/18 | EXAM 5 (Biomed I - Room 205/207 7:50 a.m. –9:50 a.m.) Includes 8 learning events by Simmen and Simmen | 2 hours |
| 4/30/18 | Pancreas and Adipose Physiology | K Shankar |
| 5/02/18 | Endocrine Regulation of Calcium, Phosphate and Bone Homeostasis | Morello |
| 5/04/18 | Adrenal Gland | Franco |
| 5/07/18 | Thyroid Gland | Franco |
| 5/09/18 | Exercise Physiology | Franco |
| 5/11/18 | Assigned Special Topics for Discussion | Franco, Morello |
| 5/14/18 | EXAM 6 (Biomed I - Room 205/207 7:50 a.m. – 9:50 a.m.) Includes 6 learning events by Shankar, Morello and Franco | 2 hours |