

**CAMB 5320  
HUMAN PHYSIOLOGY  
21 Jan. – 29 Apr. 2026**

**Spring 2026 Mon, Weds, Fri, 8.30-10:00am**  
**Room Smilow Center Translation Research (SCTR) 10-146**  
**Directors: Drs. Tejvir S. Khurana and Benjamin L. Prosser**  
**Teaching Assistant: Lauren Elizabeth Lee**

**Membrane, Channels CNS N = 6 Lectures**

**Membrane, Nervous System Physiology**

|         |                 |                                                     |
|---------|-----------------|-----------------------------------------------------|
| Jan. 21 | Dr. Lee         | Action Potentials/Voltage-gates Ion Channels        |
| Jan. 23 | Dr. Subramanian | Nervous System                                      |
| Jan. 26 | Dr. Lee         | Synaptic Transmission and Ligand-gated Ion Channels |

**Nervous System**

|         |                 |                           |
|---------|-----------------|---------------------------|
| Jan. 28 | Dr. Lee         | Sensory Physiology        |
| Jan. 30 | Dr. Subramanian | Central Nervous System    |
| Feb. 2  | Dr. Subramanian | Peripheral Nervous System |

**Feb. 4            Lauren Lee            Mentored Study Day**

**Feb. 6            Exam 1 –**

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**Muscle (SkM, Sm, Cardiac & Gut) N = 10 Lectures**

**Muscle Physiology**

|         |           |                                            |
|---------|-----------|--------------------------------------------|
| Feb. 9  | Dr. Ostap | Contractile Proteins and Striated Muscle-1 |
| Feb. 11 | Dr. Ostap | Striated Muscle-2                          |
| Feb. 13 | Dr. Ostap | Smooth Muscle                              |

**Cardiovascular System**

|         |               |                                                 |
|---------|---------------|-------------------------------------------------|
| Feb. 16 | Dr. Prosser   | Cardiac and Skeletal Muscle Signaling           |
| Feb. 18 | Dr. Margulies | Myocardial Physiology and Cardiac Pump Function |
| Feb. 20 | Dr. Margulies | Vascular Physiology                             |
| Feb. 23 | Dr. Margulies | Cardiovascular Integration                      |

**Digestive System**

|         |                |                                             |
|---------|----------------|---------------------------------------------|
| Feb. 25 | Dr. Hirschorn  | GI Tract                                    |
| Feb. 27 | Dr. Zackular   | Gut microbiome                              |
| Mar. 2  | Dr. Heuckeroth | Bowel motility and human motility disorders |

**Mar. 4            Lauren Lee            Mentored Study Day**

**Mar. 6            Exam 2 –**

**Mar. 7-15        No class (Spring Break)**

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**Endocrine, Renal N = 8 Lectures**

**Endocrine Physiology**

|         |             |                                                  |
|---------|-------------|--------------------------------------------------|
| Mar. 16 | Dr. Merrick | Hormone action; Neuroendocrinology of metabolism |
| Mar. 18 | Dr. Merrick | Glucose Homeostasis; Insulin Signaling           |

|         |           |                              |
|---------|-----------|------------------------------|
| Mar. 20 |           | TBD                          |
| Mar. 23 | Dr. Hayes | Control of food intake       |
| Mar. 25 | Dr. Hayes | Regulation of energy balance |

### **Renal System**

|               |                   |                                                                                                 |
|---------------|-------------------|-------------------------------------------------------------------------------------------------|
| Mar. 27       | Dr. Shulman       | Organization of the Kidney and Glomerular Filtration / Regulation of Potassium and Acid Balance |
| Mar. 30       | Dr. Fay           | Regulation of Sodium Balance                                                                    |
| Apr. 1        | Dr. Spiardi       | Regulation of Water Balance                                                                     |
| <b>Apr. 3</b> | <b>Lauren Lee</b> | <b>Mentored Study Day</b>                                                                       |
| <b>Apr. 6</b> | <b>Exam 3 –</b>   |                                                                                                 |

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## **Repro, Lung, Integration, Exercise N = 8 Lectures**

### **Reproductive Physiology**

|         |             |                                |
|---------|-------------|--------------------------------|
| Apr. 8  | Dr. Mainigi | Female Reproductive Physiology |
| Apr. 10 | Dr. Hwang   | Male Reproductive Physiology   |
| Apr. 13 | Dr. Martin  | Fertilization Physiology       |

### **Respiratory System**

|         |            |                                                    |
|---------|------------|----------------------------------------------------|
| Apr. 15 | Dr. Planer | Ventilation/Perfusion & Gas Exchange and Transport |
| Apr. 17 | Dr. Planer | Gas Exchange and Transport                         |

### **Integration**

|         |             |                                      |
|---------|-------------|--------------------------------------|
| Apr. 20 | Dr. Khurana | Integrative Responses to Exercise    |
| Apr. 22 | Dr. Khurana | Integrative responses to Environment |
| Apr. 24 | Lauren Lee  | Exercise in Health and Disease       |

|                |                   |                       |
|----------------|-------------------|-----------------------|
| <b>Apr. 27</b> | <b>Lauren Lee</b> | <b>Mentored Study</b> |
|----------------|-------------------|-----------------------|

|                |                 |                                     |
|----------------|-----------------|-------------------------------------|
| <b>Apr. 29</b> | <b>Exam 4 –</b> | <b>NB: this exam starts at 8:15</b> |
|----------------|-----------------|-------------------------------------|