

**UNIVERSITY OF GUELPH  
DEPARTMENT OF BIOMEDICAL SCIENCES  
BIOM3200 WINTER 2017**

Time: Jan. 10 to April 6, Tuesdays and Thursdays, 10:00-11:20 a.m.

Location: WMEM Room 103

Text: Fox's Human Physiology, ISBN: 0077836375

Coordinator, Lecturer: Dr. Tami Martino, [tmartino@uoguelph.ca](mailto:tmartino@uoguelph.ca)

- TA: Danyelle Liddle, [dliddle@uoguelph.ca](mailto:dliddle@uoguelph.ca)  
- *Endocrine, Cardiovascular, Digestion*
- TA: Paul Gelis, [pgelis@uoguelph.ca](mailto:pgelis@uoguelph.ca)  
- *Reproduction, Neuro*
- TA: Amber Hutchinson, [hutchina@uoguelph.ca](mailto:hutchina@uoguelph.ca)  
- *Renal, Immune*

Lecture Schedule:

**ENDOCRINE SYSTEM**

Jan. 10 Endocrine Principles  
Hormones and Receptors  
Pituitary Gland

12 Hypothalamic control  
Adrenal axis  
Thyroid

17 Calcium balance  
Growth Control

19 Male Endocrine System  
Female Endocrine System

**RENAL SYSTEM**

24 Electrolyte and water balance  
Anatomy of the kidney  
Microanatomy of the kidney, filtration

26 Renal regulation: the nephron, glomerular filtration  
Tubular reabsorption, secretion  
Regulation of acid-base balance

31 REVIEW CLASS FOR TERM TEST #1

Feb. 02 Term test #1 (1 hour, covers lectures Jan 10 – Jan 26, inclusive)
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## REPRODUCTIVE SYSTEM

### CARDIOVASCULAR SYSTEM

- Feb. 07 Cardio-vascular system  
Blood vessels: structure, hemodynamics  
Blood Flow  
Regulation of peripheral resistance
- 09 Cardio-respiratory system  
Cardiac Anatomy  
Cardiac contraction (cellular)
- 14 Cardiac contraction (molecular)  
Heart Disease

### REPRODUCTIVE SYSTEM

- Feb. 16 Gametogenesis  
Pregnancy, Early embryo development

*Mon. Feb 20 – Friday Feb 24: **WINTER BREAK NO CLASSES***

- 28 Female/Male Reproductive systems  
Sex determination and differentiation
- Mar 02 Partuition, postpartum, lactation
- 07 REVIEW CLASS FOR TERM TEST #2

Mar. 09 Term test #2 (1 hour, covers lectures February 07 – Mar 02, inclusive, Reproductive and Cardiovascular Systems)
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### BLOOD & IMMUNE SYSTEM

- Mar. 14 Blood: constituents and functions of plasma
- 16 Erythrocytes, Leukocytes

21 Platelets and blood coagulation

### **NERVOUS SYSTEM**

- Mar. 23 Introduction to neurophysiology  
Cellular Physiology  
Autonomic Nervous system
- 28 Cell membrane and transport  
Membrane resting and action potentials  
Action potential conduction
- 30 Central Nervous system

### **DIGESTIVE SYSTEM**

- Apr. 04 Structure and Function
- 06 Digestion and Absorption  
Role of accessory organs

All sections are on the FINAL EXAM (2 HOURS), which covers all material on the Endocrine, Renal, Reproductive, Cardiovascular, Immune, Cardiovascular, Nervous, and Digestive Systems. However greater emphasis will be on the sections that have not yet been tested – Immune System, Neurophysiology, and digestion. Details will be provided in class.

### **FINAL EXAM**

*THURSDAY April 13, 2017 11:30 – 1:30*