UNIVERSITY OF GUELPH
DEPARTMENT OF BIOMEDICAL SCIENCES - BIOM3200 WINTER 2023

ALL LECTURES & TESTS ARE IN-CLASS ONLY - UNLESS OTHERWISE NOTED BY THE UNIVERSITY

THIS COURSE IS NOT OFFERED HYBRID OR ASYNCHRONOUS IN W2023

Time: Jan. 10 to April 6, Tuesdays and Thursdays, 10:00-11:30 a.m.
Location: ROZ 104

Coordinator, Lecturers:
Dr. Tami Martino
(Neuro, Endocrine, Reproductive: Jan 10 to Feb 16)
Email: tmartino@uoguelph.ca

Dr. Karson Theriault
(Cardiovascular, Immune, Renal, Digestive physiology: Feb 17 – Apr 6)
Email: theriauk@uoguelph.ca

Course TAs
Students with LAST names starting with A to C: Megan Vaz - mvaz@uoguelph.ca
Students with LAST names starting with D to H: Caitlin Nolan - cnolan05@uoguelph.ca
Students with LAST names starting with I to M: Ava Rae Noon - anoon@uoguelph.ca
Students with LAST names starting with N to SH: Resh Carter - recarter@uoguelph.ca
Students with LAST names starting with SI to Z: Julian Eftimovski - jeftimov@uoguelph.ca

Lecture Schedule:

NEUROPHYSIOLOGY
Jan. 10 Introduction to BIOM3200
Introduction to neurophysiology
Cellular Physiology
Autonomic Nervous system

12 Autonomic Nervous system
Cell membrane and transport
Membrane resting and action potentials

17 Action potential conduction
Central Nervous system
ENDOCRINE PHYSIOLOGY
19 Finish up Central Nervous System
    Endocrine Principles
    Hormones and Receptors
    Pituitary Gland

24 Hypothalamic control
    Adrenal axis
    Thyroid

26 Calcium balance
    Growth Control

31 Male Endocrine System
    Female Endocrine System

Feb 2 Finish up Endo lectures
    Review and discuss term test

Feb. 7 Term test #1 (1 hour, covers lectures Jan 10 – Feb 2, inclusive – Neurophysiology & Endocrine sections).

REPRODUCTIVE PHYSIOLOGY
9 Gametogenesis
    Pregnancy, Early embryo development

14 Female/Male Reproductive systems
    Sex determination and differentiation

16 Parturition, postpartum, lactation

Monday Feb 20 – Sunday Feb 26: WINTER BREAK NO CLASSES

CARDIOVASCULAR (CARDIO/VASCULAR / MUSCLE / RESPIRATORY PHYSIOLOGY)
28 Cardio-vascular system
    Blood vessels: structure, hemodynamics
    Blood Flow

March 2 Regulation of peripheral resistance
    Cardio-respiratory system
7 Cardiac Anatomy
Cardiac contraction, muscle contraction (cellular)
Heart Disease

BLOOD & IMMUNE SYSTEM PHYSIOLOGY
9 Blood: constituents and functions of plasma

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<th>Date</th>
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<td>March 14</td>
<td>Term test #2 (1 hour, covers lectures Feb 9 – Mar 7 (Reproductive, Cardiovascular)</td>
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16 Erythrocytes, Leukocytes
21 Platelets and blood coagulation

RENAL SYSTEM
23 Electrolyte and water balance
Anatomy of the kidney
Microanatomy of the kidney, filtration
28 Renal regulation: the nephron, glomerular filtration
Tubular reabsorption, secretion
Regulation of acid-base balance
30 Finish up renal lectures
Review and discuss term test

DIGESTIVE SYSTEM PHYSIOLOGY
April 4 Structure and Function
6 Digestion and Absorption
Role of accessory organs

All sections are on the FINAL EXAM (2 HOURS), which covers all material on the Neuro, Endocrine, Reproductive, Cardio/Vascular/Muscle/Respiratory, Immune, Renal and Digestive physiology sections. However greater emphasis will be on the sections that have not yet been tested – Immune, Renal and Digestive. Details will be provided in class.

FINAL EXAM:  TUESDAY April 25, 2:30 pm – 4:30 pm