

**UNIVERSITY OF GUELPH
DEPARTMENT OF BIOMEDICAL SCIENCES
BIOM2000, FALL 2011**

Time: Friday September 9 – December 16, Monday, Wednesdays & Fridays, 10:30-11:20 a.m.

Location: MACN, Room 105

Coordinator/Instructor: Dr. Tami Martino

Textbook and CD-ROM: *Essentials of Human Anatomy and Physiology*, 10th Edition by E. N. Marieb is required and is essential for the course.

Lecture Schedule:

UNIT 01 - INTRODUCTION TO PHYSIOLOGY, HOMEOSTASIS AND CELL STRUCTURE (3 lectures)

Sept. 9, 12, 14 *Chapter 1 (pp 7-9, 12-13)*
Homeostasis
Homeostatic control mechanisms
Homeostatic imbalance

Chapter 2 (pp39-42, 45, 47-54, 56-57)
Fundamentals of the biochemistry of cells
The chemicals that make up cells

Chapter 3 (pp63-81 – up to Cell Division)
Cell structure and the major cell organelles
The cell (plasma) membrane
Membrane transport (diffusion, osmosis, facilitated diffusion, filtration, active transport, bulk transport)

Chapter 7 (pp23-238)
Structure of nerve cells (neurons)
Generation of the nerve impulse
Anatomy and function of the synapse

UNIT 02 – THE NERVOUS SYSTEM

Sept. 16, 19, 21 *Chapter 7 (pp 226-251)*
(up to the section on brain dysfunction)

Chapter 7 (pp253-256)
(beginning with the section on Spinal Cord, up to the section on Cranial Nerves)

Chapter 7 (pp266-267)

Chapter 8 (pp297-304)
(sections on hearing and equilibrium)
(and relevant summary questions up to page 307)

UNIT 03 – MUSCLES

Sept. 23, 26, 28 *Chapter 6 (pp 181-196)*
(up to the section on Effect of Exercise on Muscle)
Summary p. 222

UNIT 04 – BLOOD AND BLOOD CIRCULATION

Sept. 30 *First of 3 lectures (see below)*

Monday Oct. 3	TERM TEST #1 (50 min, covers UNITS 1-3, inclusive) (Worth 20% of course mark)
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UNIT 04 – BLOOD AND BLOOD CIRCULATION

Oct. 5, 7 *Chapter 10: Blood (pp 337-355)*
**(Oct. 10: Holiday)*
Chapter 11: Cardiovascular System (pp 356-365)
(up to the section on Homeostatic Imbalance)
Chapter 11: Cardiovascular System (pp 365-373)
(Beginning at the section on Cardiac Output and up to the
section on Homeostatic Imbalance)
Chapter 11: Summary – 393-395 (as applicable)

Chapter 12: The Lymphatic System and Body Defences (pp 398-435)
(up to the section on Homeostatic Imbalance)

UNIT 05 – BODY DEFENCES

Oct. 12, 14, 17 *Chapter 4: Skin and Body Membranes (pp 109-117)*
Chapter 4: 119-127 (starting at structure of skin)
Chapter 4: Summary p. 131

Chapter 12: The Lymphatic System and Body Defences (pp 398-422)
(up to the section on Organ Transplants)
Chapter 12: Summary, pp. 431-432

UNIT 06 – LUNGS AND GAS EXCHANGE

Oct. 19, 21, 24 *Chapter 13: The Respiratory System (pp 436-453)*
(up to the section on Homeostatic Imbalance)
Chapter 13: p. 455 (up to Respiratory Disorders)
Chapter 13: Summary, pp. 460-462

UNIT 07 – KIDNEYS, WATER REGULATION, ELECTROLYTE REGULATION AND EXCRETION

Oct. 26, 28, 31 *Chapter 15: The Urinary System (pp 513-532, 535, 536-537)*

Wednesday Nov.2 TERM TEST #2
(50 min, covers UNITS 4-6, inclusive)
(worth 30% of final course mark)

UNIT 09 – REGULATION OF CELL, TISSUE AND ORGAN FUNCTION BY HORMONES

Nov. 4 *Chapter 9: The Endocrine System (pp 308-336)*

*Nov. 7 *No Class*

Nov. 9, 11

UNIT 08 – INTESTINAL TRACT, DIGESTION, ABSORPTION AND METABOLISM

Nov. 14, 16, 18 *Chapter 14: The Digestive System and Body Metabolism (pp 464-474)*
(to Accessory Digestive organs)
Chapter 14: pp. 477-483 (starts at Functions of the Digestive System).
Chapter 14: pp. 484-488 (up to PartII: Nutrition and Metabolism)
Chapter 14: pp. 491-498 (start at Metabolism, up to Body Energy Balance)
Chapter 14: Summary – pp. 507-509

UNIT 10 – REPRODUCTION AND EMBRYO DEVELOPMENT

Nov. 21, 23, 25 *Chapter 16: The Reproductive System*
pp 539-563 (up to Effects of Pregnancy on the Mother)
pp. 566-568 (start at Childbirth, up to Developmental Aspects of the Repr. System.
pp. 574-575 (summary, as applicable)

Nov. 28 **Review**

FINAL EXAM – FRIDAY DECEMBER 9, 11:30-1:30

December exam period: FINAL EXAM covers all course material. Sixty percent (60%) of the questions come from Units 7-9, and 40% of the questions are from the earlier sections on Units 1-6. Overall, your FINAL EXAM is worth 50% of your course mark.