BIOLOGY 2030: Introductory Human Physiology
Proposed 2022 COURSE OUTLINE
(In light of the current unstable conditions,
this course outline may be amended at any time.)

INSTRUCTOR: Dr. Robert J. Omeljaniuk, CB-4013.

LABORATORY COORDINATOR: Mr. Mike Moore, CB 3011.

TEXTBOOK: Silverthorn, D.U. Human Physiology – An Integrated Approach (8th ed.). Pearson. 2019. 837 pp. ISBN 13: 978-0-13-460519-7.

STUDENT WORKBOOK (if available). If available, bundled with textbook free of charge! A good resource for self-study.

LABORATORY MANUAL: Lab manuals for physiology accompany the textbook in the bookstore or will be devolved electronically by the Lab Director.

PROPOSED CURRICULUM: To be promulgated.

IMPORTANT NOTICE REGARDING LECTURES:

At this time, lectures must be offered online, at least until 24 Jan 2022; there is presently no intel on what the situation will be thereafter. It is very likely that lectures, and/or term tests, will be offered online throughout the term. ZOOM meetings have been organized and you may join the meetings if you are formally registered in this course.

IMPORTANT NOTICE REGARDING LABS:

At this time, the occurrence of labs in BIOL 2030 is not confirmed. If labs occur, then students will be notified by Mr. Michael Moore, Lab Coordinator. In the event that labs do not occur this year, then marks will be based solely on two in-class term tests. More information regarding labs will follow.

LABORATORY EXERCISES: Student attendance and active participation in laboratories is mandatory; students who miss their assigned lab period must reschedule their exercise with Mr. Moore. Every reasonable attempt will be made to accommodate student requests.

TENTATIVE LAB SCHEDULE (To be confirmed directly to students by Lab Director):

1. Neurophysiology.
2. Cardio-respiratory physiology.
3. Renal physiology.
4. Blood.

COURSE MARKING OUTLINE

1. Term Test 01. **17 Feb 2022**. 50 % of Final Mark

This is a multiple choice (Scantron) test which requires the use of pencil and eraser. Students who miss the midterm test as a consequence of illness, bereavement, or some other factor beyond their control must petition the Course Instructor to allocate the value of the midterm test to the final term test which will assume 100% of the Final Mark. Petitions are to be made in writing under original signature (e-mails are not acceptable), substantiated, and

signed and received no later than one calendar week following the term test; the Instructor will advise students subsequently on their requests. **Students who miss the midterm test, and do not formally request consideration in a timely manner will receive a mark of zero (0**).

2. Lab Assignments Exercises. **TBA**

3. Term Test 02. 31 Mar 2022. 50 % of Final Mark.

These are a multiple choice (Scantron) tests which requires the use of pencil and eraser. Students who miss the midterm test as a consequence of illness, bereavement, or some other factor beyond their control must petition the Course Instructor to allocate the value of the midterm test to the final term test which will assume 100% of the Final Mark. Petitions are to be made in writing under original signature (e-mails are not acceptable), substantiated, and signed and received no later than one calendar week following the term test; the Instructor will advise students subsequently on their requests. **Students who miss any term test, and do not formally request consideration in a timely manner will receive a mark of zero (0**).

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BIOLOGY 2030: Introductory Human Physiology Proposed Curriculum:

1. Introductory Reading Assignment. Chapters 1 to 3, inclusive.

Students should have a working knowledge of this material. The purpose of this assignment is to ensure that all students have a common frame of reference in order to support their progression in the course. Questions will not be asked directly on this material.

PROPOSED LECTURE TOPICS AND REFERENCE MATERIAL

SECTION I-NEUROPHYSIOLOGY

Textbook References:

Chapter 9. The central nervous system.
Chapter 8. Neurons: cellular and network properties.
Chapter 10. Sensory physiology.
Chapter 11. Efferent division: autonomic and somatic motor control.

SECTION II-MUSCLE PHYSIOLOGY

Textbook References:

Chapter 12: Muscles.
Chapter 13. Integrative physiology I: Control of body movement.

SECTION III. CARDIOVASCULAR PHYSIOLOGY

Textbook References:

Chapter 14: Cardiovascular physiology.
Chapter 15: Blood flow and the control of blood pressure.

SECTION IV-RESPIRATION.

Textbook References:

Chapter 17: The mechanics of breathing.
Chapter 18: Gas exchange and transport.

SECTION V-EXCRETION AND OSMOREGULATION.

Textbook References:

Chapter 19: The kidneys.
Chapter 20: Integrative physiology II: Fluid and electrolyte balance.

NOTE: The lectures for this course are under revision in order to accommodate the order of topics covered in the textbook. These revisions are intended to attempt to coordinate lecture slides in the order they appear in the textbook in order to facilitate student study. Consequently, the textbook should be read carefully in order to supplement and reinforce lecture material. Nonetheless, there may invariably occur some discontinuities in presentation; your cooperation is greatly appreciated.