



ORIGINAL COURSE IMPLEMENTATION DATE: September 1993
 REVISED COURSE IMPLEMENTATION DATE: September 2018
 COURSE TO BE REVIEWED: (six years after UEC approval) March 2024
 Course outline form version: 09/15/14

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: KIN 270	Number of Credits: 4 Course credit policy (105)																
Course Full Title: Human Physiology I Course Short Title (if title exceeds 30 characters):																	
Faculty: Faculty of Health Sciences	Department (or program if no department): Kinesiology																
Calendar Description: Examines the structure and function of systems involved in the control and execution of human movement, including a detailed examination of the integumentary system, the musculoskeletal system, and the integration and control systems (nervous and endocrine). Note: Students with credit for KPE 270 cannot take this course for further credit.																	
Prerequisites (or NONE):	30 university-level credits including KIN 170 (formerly KPE 170) with a C+ or better.																
Corequisites (if applicable, or NONE):	NONE																
Pre/corequisites (if applicable, or NONE):	NONE																
Equivalent Courses (cannot be taken for additional credit) Former course code/number: KPE 270 Cross-listed with: Equivalent course(s): KPE 290; KPE 270 <i>Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.</i>	Transfer Credit Transfer credit already exists: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Transfer credit requested (OReg to submit to BCCAT): <input type="checkbox"/> Yes <input type="checkbox"/> No (if yes, fill in transfer credit form) Resubmit revised outline for articulation: <input type="checkbox"/> Yes <input type="checkbox"/> No To find out how this course transfers, see bctransferguide.ca .																
Total Hours: 75 Typical structure of instructional hours: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr><td>Lecture hours</td><td style="text-align: center;">40</td></tr> <tr><td>Seminars/tutorials/workshops</td><td></td></tr> <tr><td>Laboratory hours</td><td style="text-align: center;">35</td></tr> <tr><td>Field experience hours</td><td></td></tr> <tr><td>Experiential (practicum, internship, etc.)</td><td></td></tr> <tr><td>Online learning activities</td><td></td></tr> <tr><td>Other contact hours:</td><td></td></tr> <tr><td style="text-align: right;">Total</td><td style="text-align: center;">75</td></tr> </table>	Lecture hours	40	Seminars/tutorials/workshops		Laboratory hours	35	Field experience hours		Experiential (practicum, internship, etc.)		Online learning activities		Other contact hours:		Total	75	Special Topics Will the course be offered with different topics? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, different lettered courses may be taken for credit: <input type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit <i>Note: The specific topic will be recorded when offered.</i>
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Other contact hours:																	
Total	75																
Department / Program Head or Director: Alastair Hodges																	
Date approved: May 2017																	
Faculty Council approval																	
Date approved: May 2017																	
Campus-Wide Consultation (CWC)																	
Date of posting: February 9, 2018																	
Dean/Associate VP: Joanne MacLean																	
Date approved: May 2017																	
Undergraduate Education Committee (UEC) approval																	
Date of meeting: March 23, 2018																	

Maximum enrolment (for information only): 36
Expected frequency of course offerings (every semester, annually, every other year, etc.): four times annually

Learning Outcomes

Upon successful completion of this course, students will be able to

1. Explain organ system involvement in human structure, sensation and perception, movement, integration, and regulation.
2. Explain the functions of the integumentary system, including somatic sensation and thermoregulation
3. Describe the skeletal system including bone composition, function, remodeling, and growth regulation
4. Describe the muscular system, including contraction kinetics, excitation contraction coupling, fibre types, and muscle energetics
5. Explain the nervous system, including action potentials, impulses, neural processing, structure and function of the central and peripheral nervous systems, and special senses
6. Explain the endocrine system, including the regulation of hormone secretion

Prior Learning Assessment and Recognition (PLAR)

Yes No, PLAR cannot be awarded for this course because

Typical Instructional Methods (guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion)

Lecture: audiovisual and/or online presentation; computer interaction (integral to online sections and labs); class participation/discussion (some group work involved).

Laboratory experiences: practical application of lecture material involving models, diagrams, and use of relevant laboratory equipment.

Grading system: Letter Grades: Credit/No Credit: Labs to be scheduled independent of lecture hours: Yes No

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials (if more space is required, download Supplemental Texts and Resource Materials form)

Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1. Silverthorn, D.U.	Human Physiology: An Integrated Approach, 6 th ed.	<input checked="" type="checkbox"/>	Pearson	2013
2. Marieb, E.N. & Hoehn, K.	Human Anatomy and Physiology, 9 th ed.	<input checked="" type="checkbox"/>	Pearson	2015
3.	Human Anatomy and Physiology	<input type="checkbox"/>	Open Source	

Required Additional Supplies and Materials (software, hardware, tools, specialized clothing, etc.)

Laboratory space is provided along with anatomical charts and models. Equipment for muscle and nerve experiments will be available. Sensory tests will also be conducted.

Typical Evaluation Methods and Weighting

Final exam:	20%	Lab work:	40%	Midterm exams:	40%	Total:	100%
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Typical Course Content and Topics

Histology (could be included in systems units)

Integumentary system

- defensive and protective functions
- cutaneous sensations
- thermoregulation

Skeletal system

- composition and mechanical properties of bone
- hormonal regulation of the growth, development, remodeling of bone

Muscular system

- contraction kinetics
- excitation-contraction coupling
- muscle fibre types
- muscle cell energetics

Nervous system

- resting membrane potentials, action potentials, and impulses
- synapses and neurotransmitters
- post synaptic potentials (excitation and inhibition) and neural processing
- central nervous system physiology (brain and spinal cord)
- somatosensory system and reflexes
- autonomic nervous system physiology
- special senses

Endocrine system

- mechanism of hormone action (steroid and non-steroid)
- second messenger systems and signal transduction
- functions of glandular secretions
- hypothalamic-pituitary interactions and the regulation of hormone secretions