COLLEGE OF THE ROCKIES

Basic Human Anatomy – KNES 190

Kinesiology Program

Course Outline

COURSE IMPLEMENTATION DATE:	**April 1999**
OUTLINE EFFECTIVE DATE:	**September 2020**
COURSE OUTLINE REVIEW DATE:	**March 2025**

GENERAL COURSE DESCRIPTION:

This course introduces the student to basic human anatomy and physiology. The basic structure and function of various organ systems are discussed through a series of lectures and labs. Organ systems included in this course are skeletal, muscular, cardiovascular, respiratory, nervous, urinary and endocrine systems.

Program Information: This is a required course in the Kinesiology Diploma Program and may be used as an elective for students in other disciplines.

Delivery: This course is delivered face to face.

COTR Credits: 3

Hours for this course: 75 hours

Typical Structure of Instructional Hours:

Instructional Activity	Duration
Lecture Hours	45
Seminars / Tutorials	
Laboratory	30
Practicum / Field Experience Hours	
Other Contact Hours	
Total	75

Practicum Hours (if applicable):

Type of Practicum	Duration
On-the-job Experience	N/A
Formal Work Experience	N/A
Other	N/A
Total	

Course Outline Author or Contact:
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Signature

APPROVAL SIGNATURES:

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Department Head Signature

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Dean Signature

EDCO

Valid from: September 2020 – March 2025

Education Council Approval Date

COURSE PREREQUISITES AND TRANSFER CREDIT:

Prerequisites: Minimum 65% in either English 12, English Studies 12, English First Peoples 12, ENGL 090, or equivalent (refer to Course Equivalency information on the College Website)

Corequisites: None

Flexible Assessment (FA):

Credit can be awarded for this course through FA ☑ Yes ☐ No

Learners may request formal recognition for flexible assessment at the College of the Rockies through one or more of the following processes: External Evaluation, Worksite Assessment, Demonstration, Standardized Test, Self-assessment, Interview, Products/Portfolio, Challenge Exam. Contact an Education Advisor for more information.

Transfer Credit: For transfer information within British Columbia, Alberta and other institutions, please visit http://www.cotr.bc.ca/Transfer.

Students should also contact an academic advisor at the institution where they want transfer credit.

Prior Course Number: HKIN 190 ⇨⇨KNES 190
Date changed: September 2012

Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Marieb, Elaine, P. Wilhelm and J. Mallatt. *Human Anatomy.* (6th ed.). Benjamin Cummings, (2012).

Krieger, Paul A. *A Visual Analogy Guide to Human Anatomy,* Morton Publishing. 2nd ed. (2009).

Please see the instructor's syllabus or check COTR's online text calculator http://go.cotr.bc.ca/tuition/tCalc.asp for a complete list of the currently required textbooks.

LEARNING OUTCOMES:

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

- use basic and general anatomical terminology;
- identify the various components of the skeletal system and understand anatomical knowledge of bones, joints and joint structure;
- identify the main muscles of the human body, their origin, insertion and their action on the human body and understand basic cellular kinetics and mechanics of skeletal muscles;
- identify the various components of the central nervous system and the peripheral nervous system, understand the basic cellular anatomy and physiology of neurons, and understand control and coordination of movement;
- identify the various components of the circulatory system, understand the basic cardiac conduction system and vascular anatomy;
- identify the various components of the respiratory system and understand the basic mechanics and regulation of ventilation and gas exchange;
- identify the various components of the digestive system and understand the basic mechanical and chemical components of digestion and absorption;
- identify the various components of the urinary system and understand basic filtration, reabsorption and secretion; and
- identify the various components of the endocrine system and understand basically how hormones affect human function.

COURSE TOPICS:

Unit I: Introduction to the Human Body, Tissues, Skeletal System and Joints
Unit II: Introduction to the Muscular System and Nervous System
Unit III: Introduction to the Cardiovascular, Respiratory, Digestive, Urinary and Endocrine Systems

Course Content

Unit I: Introduction to the Human Body, Tissues, Skeletal System and Joints

1. Introduction to the Human Body
   - Terminology
   - Planes
   - Cavities

- Structural Units
- Homeostasis

2. Tissues (Classification, Structure and Function)
   - Epithelia
   - Connective
   - Muscle
   - Nervous

3. Integumentary System

   - The Layers of the Skin
   - Accessory Structures to the Skin
   - Functions of the Integumentary System
   - Homeostasis/ Skin Health

4. The Skeletal System
   - Growth and Formation of Bone
   - Histology of Bone
   - Classification of Bone
   - Effects of Exercise on Bone/Bone Health

5. The Articular System
   - Classification of Joints: Structure and Function
   - Movements of Joints
   - Synovial Joints
   - Joint Health

Unit II: Introduction to the Muscular System and Nervous System

1. The Muscular System
   - Classification of Muscle
   - Skeletal Muscle Structure and Function
   - Physiology of Muscle Contraction
   - Muscle Twitch/Muscle Tone
   - Smooth Muscle
   - Cardiac Muscle
   - Muscle Health

2. Metabolism
   - ATP
   - Aerobic Metabolism
   - Anaerobic Metabolism

3. The Nervous System- Intro to the Spinal Cord and Spinal Nerve
   - Classification of Nerve Cells
   - Nerve Impulse
   - The Reflex Arc
   - The Spinal Cord
   - Spinal Nerves

4. The Nervous System- The Brain, Cranial Nerves, Autonomic Nervous System and Special Senses – Chapter 11
    - Principle Parts of the Brain
    - Brain Stem
    - Midbrain
    - Cranial Nerves
    - Special Senses

Unit III: Introduction to the Cardiovascular, Respiratory, Digestive, Urinary and Endocrine Systems

1. The Blood
    - Functions of the Blood
    - Classification of Blood
    - The Clotting Mechanism

2. The Cardiovascular System
    - Structure and Function of the Heart
    - Blood Flow Through the Heart
    - Conduction System
    - Heart Health

3. The Respiratory System
    - Structure and Function of the Respiratory System
    - The Respiration Process
    - Maintaining a Healthy Respiratory System

4. Digestive System
    - Structure and Function of the Digestive System
    - Maintaining a Healthy Digestive System

5. The Urinary System
    - Structure and Function of the Urinary System
    - Basic structure and function of the Nephron
    - Maintaining a Healthy Urinary System

6. The Endocrine System
    - Classification and Function of Hormones
    - The Major Endocrine Glands and their hormones

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

EVALUATION AND ASSESSMENT:

Assignments	% Of Total Grade
Lab Exams (3)	35%
Unit Exams (2)	30%
Lab Quizzes	10%
Final Exam	25%
Total	100%

Please see the instructor's syllabus for specific classroom policies related to this course, such as details of evaluation, penalties for late assignments and use of electronic aids.

EXAM POLICY:

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled exam without approval will be given a grade of "0" for the exam.

COURSE GRADE:

Course grades are assigned as follows:

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Mark (Percent)	≥ 90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	< 50

A grade of "D" grants credit, but may not be sufficient as a prerequisite for sequential courses.

ACADEMIC POLICIES:

See www.cotr.bc.ca/policies for general college policies related to course activities, including grade appeals, cheating and plagiarism.

COURSE CHANGES:

Information contained in course outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment and marketing needs. The instructor will endeavour to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.