



## KNES-190 – Basic Human Anatomy

### Health and Human Services

**Effective Term & Year:** Fall 2022

**Course Outline Review Date:** 2025-03-01

**Program Area:** Health

#### 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 Methods:** On-campus (Face-to-Face)

**Credit Type:** College of the Rockies Credits

**Credits:** 3

**Course type/s:** Sciences, Lab Sciences

#### Instructional Activity and Hours:

Activity	Hours
Classroom, Directed Studies or Online Instruction	45
Seminar/Tutorials	
Laboratory/Studio	30
Practicum/Field Experience	
Co-op/Work Experience	

Other

Total	75
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### Course Requisites:

- Earned a minimum grade of C+ (65%) in at least 1 of the following:
  - [ENFP 12](#) – English First Peoples 12
  - [ENST 12](#) – English Studies 12
  - [ENGL090](#) – English – Provincial Level

### Flexible Assessment: Yes

In some cases students may be able to apply for recognition of prior learning outside the classroom. This flexible assessment process provides equivalent course credit. It is a rigorous process that may include external evaluation, worksite assessment, demonstration, standardized test, self-assessment, interview, products/portfolio, and challenge exam, or other measures as appropriate. Tuition fees apply. Contact an education advisor for more information.

### Course Transfer Credit:

For information about receiving transfer credit for courses taken at either British Columbia or Alberta institutions, please see <https://www.bctransferguide.ca/> or <https://transferalberta.alberta.ca> . For more transfer credit information, please visit <https://www.cotr.bc.ca/Transfer>

All requests for course transfer credit from institutions in British Columbia or elsewhere should go to the College of the Rockies Enrolment Services office.

### Textbook 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 <https://textbook.cotr.bc.ca/> for a complete list of the currently required textbooks.

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## 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.
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## 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 Assessments

### Assessment Type: On-Campus (face-to-face)

Assessment Type	% of Total Grade
Lab Exams (3)	35%
Unit Exams (2)	30%
Lab Quizzes	10%
Final Exam	25%
Total	100%

### Grade Scheme

A+	A	A-	B+	B	B-	C+	C	C-	D	F
>=90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	<50

**Pass requirements:** None

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

### Exam Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a "0" on the exam.

### Academic Policies:

College of the Rockies policies related to courses can be found at <https://cotr.bc.ca/about-us/college-policies/> and include the following:

- Policy 2.4.3 Students with Documented Disabilities
  - Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
  - Policy 2.5.8 Academic Performance
  - Policy 2.5.3 Grade Appeal
  - Policy 2.4.9 Student Concerns Re Faculty
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### **Equivalent Course(s) and Course Code Changes**

Prior Course Code: HKIN 190 >> KNES 190

Date changed: September 2012

### **Course Changes:**

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.