



## KNES-190 – Human Anatomy

Health and Human Services

**Effective Term & Year:** Fall 2025  
**Course Outline Review Date:** 2030-03-01

**Program Area:** Health

### Description:

This course introduces the student to human anatomy. The structures and functions of various tissues and organ systems are discussed through a series of lectures and labs. Organ systems included in this course are: integumentary, skeletal, muscular, cardiovascular, respiratory, nervous, digestive, 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

### Prior Learning and Recognition: Yes

Students are able to request formal recognition of their prior learning or experience outside the classroom. Challenge examination, portfolio-assisted assessment, work-based assessment or a combination of assessments that is appropriate to identify, assess, and recognize prior skills, competencies, and knowledge to achieve course credit. Tuition fees apply, refer to Policy 2.5.5 [Prior Learning Assessment and Recognition \(PLAR\)](#) or contact an education advisor for more information.

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### 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.

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### 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:

Betts, J.G., Young, K.A., Wise, J.A., Johnson, E., Poe, B., Kruse, D.H., Korol, O., Johnson, J.E.,

Womble, M., & DeSaix, P. (2022). *Anatomy & physiology* (2nd ed.). Openstax.

<https://openstax.org/books/anatomy-and-physiology-2e/pages/1-introduction>

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:

- apply anatomical and movement terminology;
  - identify gross and microscopic structures of the skeletal system;
  - identify bones and basic bone markings;
  - classify joints and identify basic joint structures;
  - identify the main muscles of the human body and articulate their general origin, insertion and actions;
  - explain the fundamental mechanics of skeletal muscle contraction and differentiate between contraction types;
  - identify the main components of the central and the peripheral nervous systems, and explain their basic functions;
  - describe the basic components of a reflex arch and how it functions;
  - identify components of the heart and circulatory system, and explain their basic functions;
  - identify components of the respiratory system, and explain their basic functions;
  - explain the basic mechanics and regulation of ventilation and gas exchange;
  - identify components of the digestive system, and the locations of the main digestive processes;
  - identify the main components of the urinary system, including the nephron;
  - describe the basic components of urine formation; and
  - identify the glands of the endocrine system and explain the main functions of key hormones.
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## Course Topics:

### Course Content

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

##### 1. Introduction to the Human Body

- Anatomical and movement terminology
- Planes
- Cavities

## 2. Tissues

- Epithelia
  - Classification, structure and function
- Connective
  - Classification, structure and function
- Muscle
  - Classification, structure and function
- Nervous
  - Classification, structure and function

## 3. Integumentary System

- Layers of the skin
- Accessory structures to the skin
- Functions of the integumentary system

## 4. Skeletal System

- Histology of bone
- Gross and microscopic anatomy
- Classification of bones

## 5. Articular System

- Classification of joints: structure and junction
- Movements of joints
- Synovial joints

## Unit II: Introduction to the Muscular System and Nervous System

### 1. Muscular System

- Classification of muscle tissue
- Skeletal muscle structure and function
  - Basic fiber types
  - Motor units
  - Movements
  - Basic physiology of muscle contraction
- Smooth muscle structure and function
- Cardiac muscle structure and function

### 2. Metabolism

- ATP
- Basic energy metabolism pathways

## Central Nervous System

### 3. Spinal Cord and Spinal Nerve

- Classification of nerve cells
- Structure of a neuron
- Nerve impulse
- The reflex arc
- The spinal cord
- Spinal nerves

### 4. Brain

- Parts of the brain
- Brain stem
- Midbrain
- Cerebrum
- Cerebellum

## Peripheral Nervous System

### 5. Cranial Nerves & Special Senses

- Cranial nerves
- Structures of the ear and eye
- Sensory receptors

## Unit III: Cardiovascular, Respiratory, Digestive, Urinary and Endocrine Systems

### 1. Blood

- Functions of the blood
- Classification of blood cells

### 2. Cardiovascular System

- Structure and function of the heart
- Blood flow through the heart
- Conduction system

### 3. Respiratory System

- Structure and function
- Ventilation
- Respiration

### 4. Digestive System

- Structure and function
- 6 main processes of digestion

### 5. Urinary System

- Structure and function of the urinary system
- Basic structure and function of the nephron
- Urine formation

### 6. Endocrine System

- Classification and function of hormones
- Major endocrine glands and their hormones

### Lab Topics

Lab 1. Language of Anatomy & Movement

Lab 2. Basic Histology & Integumentary System

Lab 3. Axial Skeleton

Lab 4. Appendicular Skeleton & Joints

Lab 5. Skeletal Muscles I

Lab 6. Skeletal Muscles II

Lab 7. Nervous System

Lab 8. Cardiovascular & Respiratory Systems

Lab 9. Digestive, Urinary and Endocrine Systems

*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

**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 2.1.4 Course Audit
- Policy 2.4.1 Credential Framework
- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Rights, Responsibilities and Conduct
- Policy 2.4.8 Academic Performance
- Policy 2.4.9 Student Feedback and Concerns
- Policy 2.4.11 Storage of Academic Works
- Policy 2.5.3 Student Appeal
- Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)

## **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.