THE UNIVERSITY OF BRITISH COLUMBIA

Land Acknowledgement

We respectfully acknowledge the Syilx Okanagan Nation and their peoples, in whose traditional, ancestral, unceded territory UBC Okanagan is situated.

Health & Exercise Sciences 120 001 (3 credits)
Introduction to Human Anatomy
2025/26 W1

Faculty: Faculty of Health and Social Development

Department: Health and Exercise Sciences

Instructor: Bryce Dixon, MPT **Instructor Email:** bryce.dixon@ubc.ca

Duration: Term 1 Winter 2025

Delivery Modality: In-Person

Lecture Location: <See Workday for specific lecture and lab locations>

Course Days: Tue/Thu

Class Hours: 18:30-20:00 (6:30 pm - 8:00 pm)

Office hours:

- TA office hours (speak with your TA, these will be posted on Canvas after week 1)
- Student Learning hub (link at the end of the syllabus)
- Professor → Tues/Thurs by appointment

If these office hours don't work, please send your instructor an email with times that work for you.

Office: See HES 120 Canvas Page

Course Labs

See UBCO WorkDay for your lab time.
https://hr.ubc.ca/working-ubc/welcome-workday

Course Description

HES 120 (3) Introduction to Human Anatomy

Functional aspects of human anatomy with special attention to musculoskeletal, vascular, and neural systems that support integrated human movement. [3-2-0]

***Prerequisite**:* None

Course Format

The course combines both lecture and laboratory sessions to achieve the learning objectives. The lectures will focus on the key anatomy structures and their function as well as basic concepts and principles underpinning the study of human movement. Special topics on assessment, palpation, movement screens, as well as some relevant health related 'hot topics' will be discussed.

Laboratory activities address identification of specific anatomical structures through the use of bone, joint, limb and muscle models. In addition, the practical application of functional anatomy to movement will be explored.
Activities including discussions, practical experiences and evaluations will provide the optimal learning environment for students and require student participation.

Course Overview, Content and Objectives

The course is designed to provide in-depth information on the structure of the human body. Lectures and laboratories emphasize the anatomical relationship in the extremities and the trunk as they relate to human movement and fitness. Special attention is given to the contribution of neural, vascular and musculoskeletal systems to integrative human movement.

1. To progress students understanding of human anatomy, with particular emphasis on the skeletal, muscular, vascular and nervous systems
2. To introduce students to human anatomical terminology; as it relates to human movement and function
3. To introduce students to how the structure of the human body influences function and movement

Learning Outcomes

After completing the course students should be able to do the following with respect to the major structures and systems within the body:

1. Bones
   a. Identify, in situ and as independent structures, the major bones in the human body
   b. Label on drawings and identify on bone specimens the prominent landmarks and other special features, and relate these features with other soft tissue (tendon or ligament attachments) or bone(s) (articular surfaces)

2. Articulations
   a. Categorize and classify the joints of the human body
   b. Describe the function of joints including their normal pattern of motion
   c. Analyze anatomical features that influence the normal pattern of motion

3. Muscles
   a. Locate, identify and describe the attachments, actions and morphology, as well as introductory level innervation and vascularization, of selected skeletal muscles
   b. Determine how the location and points of attachment of skeletal muscles influence joint function

c. Describe the role of muscles as movement generators and proprioceptors
d. Understand the role, structure and function of connective tissue in the musculoskeletal system; with particular emphasis on fascia, ligaments, and tendons.

4. Vascular System
   a. Understand the differing features of the systemic vs the pulmonary vascular systems, as well as the roles of arteries, veins and capillaries in each.
   b. Map the major arteries and veins within the extremities and trunk.

5. Nervous System
   a. Central nervous system
      i. Describe the basic structural properties and location of the brainstem, spinal cord, and cranial nerves.
   b. Peripheral Nervous System
      i. Know the spinal nerves and understand how their nerve roots exit the spinal column
      ii. Identify some of the major peripheral nerves of the upper and lower extremities and trunk
      iii. Identify the lumbosacral and brachial plexuses

Assessments of Learning

LO1-5 refers to Learning Outcomes 1-5 from above

Lecture:

Midterm Examination 1 (musculoskeletal/neurovascular intro) ***THURSDAY, SEPTEMBER 25 20%***
(consists of MC/Short answer/long answer movement focused question)(Assesses LO1-5 with respect to introductory content)

Midterm Examination 2 (Thoracic/ Lumbar/ Lower Extremity) ***THURSDAY, OCTOBER 30 20%***
(consists of MC/Short answer/long answer movement focused question)(Assesses LO1-5 with respect to thoracic, lumbar and lower extremity)

Final Examination (cumulative, with focus on Csp/Shoulder/Upper Extremity) ***EXAM PERIOD 25%***
(consists of MC/Short answer/long answer movement focused question)(Assesses LO1-5 with respect to cervical spine, shoulder and upper extremity)

Laboratory:

Lab Examination 1 (musculoskeletal/neurovascular intro) ***SEPTEMBER 30 - OCT 3 15%***
Takes place during your assigned lab time, EXCEPT Tuesday labs due to NDTR. See Course Outline for details.
(Timed station exam using anatomical models. Identification of a structure and follow up questions regarding function, location, supporting structures)(Assesses LO1-5 with respect to introductory content)

Checkpoint Quizzes ***SEMESTER LONG 5%***

These timed quizzes will be completed through Canvas. There will be 8 total, each worth 0.625% of your overall course grade. They will be released on Monday and due on Friday evening at 10pm. These quizzes will be counted as part of the Lab grade for the course. If you miss the submission deadline, there will be no makeup quiz unless approved under the "Missed exam policy" guidelines.

Lab Examination 2 (Csp/Shoulder/Upper Extremity) ***NOVEMBER 25-28*** ***15%***
Takes place during your assigned lab time.
(Timed station exam using anatomical models. Identification of a structure and follow up questions regarding function, location, supporting structures)(Assesses LO1-5 with respect to cervical spine, shoulder and upper extremity)

Required Readings and Videos

- Nothing is required, but I do very highly recommend you have something from the below choices that will help you visualize the structures learned in class. We will discuss these items in the first lecture.

Recommended Software (These will be discussed in the first lecture)

FREE
- Anatomy TV (Access through UBC Library) https://resources.library.ubc.ca/page.php?details=anatomytv&id=888
- UBC Clinical Anatomy: http://www.clinicalanatomy.ca/
- UBC Neuroanatomy: http://www.neuroanatomy.ca/
- UBC Sketchfab: https://sketchfab.com/3d-models/tibia-with-muscle-markings-238760e6a0c24ab8b9e03beaf38cba13

NOT FREE
- Essential Anatomy 3D4Medical (app store ~$30)
- Complete Anatomy 3D4Medical (app store, subscription purchase)

Recommended Readings

- Drake R Gray's Anatomy for Students. Any Edition. Elsevier (older versions are acceptable)
  - This is a required textbook for upper level anatomy courses.
  - **Textbooks can sometimes be found at the library for sign out as well**
- Biel A (2019) Trail Guide to the Body: A hands-on guide to locating muscles, bones and more. 6th Edition. Books of Discovery.
  - Great book to work through with fantastic examples. Great for your upper level anatomy courses as well.

Course schedule

See HES 120 Course Outline.

Late Coursework Policy:

If a student misses the submission deadline for the Checkpoint Quizzes, no make-up quiz will be granted unless otherwise approved under the "Missed exam policy" and "Missed Activity Policy" guidelines. Contact your course instructor if you have any questions or concerns.

Missed Exam Policy:

As per UBC Policy:
Students who miss a final exam due to illness, injury, or extreme personal distress and would like to apply for a deferred exam must submit a request for an academic concession within 48 hours of the missed exam. All appropriate documentation must be submitted within 14 calendar days of the missed exam.
Contact your course instructor if you have any questions or concerns.

Missed Activity Policy:

If you miss a lab or quiz due to illness, injury, or extreme personal distress a make up lab may be granted at the discretion of the instructor. As per UBC policy, this request must be submitted within 48 hours of the missed lab, with all appropriate documentation submitted within 14 calendar days of the missed lab. Contact your course instructor if you have any questions or concerns.

Passing/Grading Criteria

Please note: as per the HES Policies, **you must pass both the lab and lecture components** of a course to receive a passing grade in that course. If you happen to fail one of these components, even if your total grade is above 50%, your final grade will be 49%.

University Tips and Tricks

1. Time Management.
    a. Work on things ahead of time so you can have a good life balance.
2. Find relevance in all of your coursework.
    a. Even if you aren't sure if you'll truly enjoy a course, try to look at what you will get out of it (study skills, your degree/ step towards your career, new friends/ experiences etc).
3. Take time to organize the course material in a way that makes sense to you.
    a. Look up definitions you don't know that keep coming up, make things link together in your mind as they will become easier to memorize.
4. Explore different learning strategies.
    a. Draw, make mnemonics, look for patterns/ analogies, test yourself, create flashcards
5. If you have a question, please do ask!

COVID-19 Policies

For updates on COVID 19 and how it pertains to your learning environment at UBC, see the link below.
https://covid19.ubc.ca/

Other Course Policies

Academic Integrity

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. **For example, incidences of plagiarism or cheating usually result in a failing grade or mark of zero on the assignment or in the course, depending on the circumstances.** Careful records are kept to monitor and prevent recidivism.

A more detailed description of academic integrity, including the University's policies and procedures, may be found in the Academic Calendar at:
http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,54,111,0

Final Examinations

You can find the Senate-approved term and examination dates here. Except in the case of examination clashes and hardships (three or more formal examinations scheduled within a 27-hour period) or unforeseen events, students will be permitted to apply for out-of-time final examinations only if they are representing the University, the province, or the country in a competition or performance; serving in the Canadian military; observing a religious rite; working to support themselves or their family; or caring for a family member. Unforeseen events include (but may not be limited to) the following: ill health or other personal challenges that arise during a term and changes in the requirements of an ongoing job.

Further information on Academic Concession can be found under Policies and Regulation in the Okanagan Academic Calendar http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,48,0,0

Grading Practices

Faculties, departments, and schools reserve the right to scale grades in order to maintain equity among sections and conformity to University, faculty, department, or school norms. Students should therefore note that an unofficial grade given by an instructor might be changed by the faculty, department, or school. Grades are not official until they appear on a student's academic record.
http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,41,90,1014

Student Services Resources:

UBC Okanagan Disability Resource Centre

The DRC facilitates disability-related accommodations and programming initiatives to remove barriers for students with disabilities and ongoing medical conditions. If you require academic accommodations to achieve the objectives of a course please contact the DRC at:

UNC 215 250.807.8053
email: drc.questions@ubc.ca
Web: www.students.ok.ubc.ca/drc

UBC Okanagan Equity and Inclusion Office

Through leadership, vision, and collaborative action, the Equity & Inclusion Office (EIO) develops action strategies in support of efforts to embed equity and inclusion in the daily operations across the campus. The EIO provides education and training from cultivating respectful, inclusive spaces and communities to understanding unconscious/implicit bias and its operation within in campus environments. UBC Policy 3 prohibits discrimination and harassment on the basis of BC's Human Rights Code. If you require assistance related to an issue of equity, educational programs, discrimination or harassment please contact the EIO.

UNC 325H 250.807.9291
email: equity.ubco@ubc.ca
Web: www.equity.ok.ubc.ca

Walk-In Well-Being Clinic

The Walk-In Well-Being clinic offers no-fee, brief, single-session psychological services. Sessions are led by a doctoral student in clinical psychology and supervised by a registered psychologist (UBCO Faculty member). Clinicians can provide support with stress management, sleep, self-care, depression, anxiety, interpersonal issues, substance misuse, coping with academic demands/stressors, and provide options for connecting to additional resources. Virtual or in-person sessions are available at the UBCO Psychology Clinic, located in ASC 167 with or without an appointment, on Tuesdays and Thursdays between 10 am and 3 pm from September to June, excluding campus closures.

UNC 337 250.807.8421 (ext. 1)
Email: ipc.ok@ubc.ca
Web: https://psych.ok.ubc.ca/psychology-clinic/walk-in-wellness/

Student Supports, Resources & Campus Services

Visit the Student Support and Resources page to find one-on-one help or explore resources to support your experience at UBC Okanagan, as well as many other campus services available to all students.

Advising Options

Visit the Advising Options page to find out about the variety of advising options available to students including but not limited to academic, career and accessibility.

Student Learning Hub

The Student Learning Hub is your go-to resource for free math, science, writing, and language learning support. The Hub welcomes undergraduate students from all disciplines and year levels to access a range of supports that include **tutoring in math, sciences, languages, and writing, as well as help with study skills and learning strategies**. Students are encouraged to visit often and early to build the skills,

strategies and behaviors that are essential to being a confident and independent learner. For more information, please visit the Hub's website.

LIB 237 250.807.8491
email: learning.hub@ubc.ca
Web: www.students.ok.ubc.ca/slh

The Global Engagement Office

The Global Engagement Office provides advising and resources to assist International students in navigating immigration, health insurance, and settlement matters, as well as opportunities for intercultural learning, and resources for Go Global experiences available to all UBC Okanagan students, and more.

Come and see us – we are here to help! You may also contact geo.ubco@ubc.ca

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Safewalk

Don't want to walk alone at night? Not too sure how to get somewhere on campus? Call Safewalk at ***250-807-8076.***

For more information, see: www.security.ok.ubc.ca