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.

Course Code & Title: **HES481 Pediatric Exercise Physiology**
Faculty: Faculty of Health and Social Development
Department: Health and Exercise Sciences
Instructor(s): Aly McComb
Instructor(s) Email: amccomb@ualberta.ca
Duration: Term 2 Winter 2026
Delivery Modality: In Person
Course Location: ART 204
Course Days: Tuesday & Thursday
Class Hours: 9:30-11:00am
Office hours: One-on-one or group zoom meetings are available by appointment – please contact me via the Canvas email system to arrange office hours.

Course Description: Investigation into the physiological responses of children and adolescents to exercise.

Course Structure: This is a data-driven, case-based course. There are three key topics in the syllabus and each has an aligned case-study. Lectures will be in person on Tuesdays and some Thursdays. These introduce key theoretical concepts and it is an expectation that these online lectures and other relevant readings or associated materials posted on Canvas will have been completed prior to Thursday's workshop. Workshop sessions take place on Thursdays. These sessions involve hands-on data analysis and application and discussion. They are important for ensuring you understand the data, content and its application, as well as the development of evidence-based arguments to be used in the case reports.

Course Overview, Content and Objectives: The aim of this module is to develop your understanding of the unique physiological responses of children and adolescents to exercise and discuss this in relation to age, sex and biological maturity. You will be challenged to act and think like a pediatric exercise physiologist through the analyses of various case scenarios.

Learning Outcomes or Objectives: Upon successful completion of this course, students will be able to:

1. Explain the growth and development of children and adolescents; analyze maturation, apply growth and developmental data to exercise case scenarios.
2. Describe the normal physiological responses of the child during different types of exercise.

3. Interpret exercise test data, compiling various outcomes in order to appraise and evaluate the child's exercise response.
4. Assess the energetic cost of physical activity and inactivity, and its application to the habitual movements of the child.
5. Explain sport specific changes in growth and development of children and adolescents, use this knowledge to create cases based on real life growth changes.

Methods of Assessment

Participation: 10% of course grade

- Active participation in class discussions, debates and relevant research discussions

Case Studies: 20% each (60% total)

- Three case studies to review your knowledge of course material and help engrain learning objectives

Workshops: 10% each (30% total)

- In class workshops to review your knowledge of course material and help engrain learning objectives

Course Schedule

	Tuesday	**Thursday**
Week 1: January 6/8	Introduction	Growth
Week 2: January 13/15	Maturation & Growth	Workshop #1 *due January 18th by EOD
Week 3: January 20/22	Growth & Sport	Delayed Maturation Debate
Week 4: January 27/29	Energy, Growth & Exercise	Case Study #1 *due February 12th by EOD
Week 5: February 3/5	Exercise Testing	Exercise Testing Cont..
Week 6: February 10/12	Fitness Testing in Schools	Workshop #2 *due February 15th by EOD
Week 7: February 17/19	Reading Week!	

Week 8: February 24/26	Resistance Training	Case Study #2 *due March 12th by EOD
Week 9: March 3/5	Physical Activity	Physical Inactivity
Week 10: March 10/12	Changing Behaviour	Workshop #3 *due March 15th by EOD
Week 11: March 17/19	Progressive Exercise	Sport Biases
Week 12: March 24/26	Injury Recovery in Pediatrics	Case Study #3 *Due by April 10th by EOD
Week 13: March 31/April 2	Early Specialization	Physical Disabilities in Sport
Week 14:	Course Wrap Up	

Learning Materials

All required readings for this course will be available via Canvas. Under the weekly module within Canvas, you will see a "weekly prep" section. In this section you will find links to all of the required readings and assigned videos that are freely available.

Other Course Policies:

Late policy: For each day late 5% is deducted.

UBC Values

UBC creates an exceptional learning environment that fosters global citizenship, advances a civil and sustainable society, and supports outstanding research to serve the people of British Columbia, Canada, and the world. UBC's core values are excellence, integrity, respect, academic freedom, and accountability.

Policies and Regulations

Visit UBC Okanagan's Academic Calendar for a list of campus-wide regulations and policies, as well as term dates and deadlines.

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. 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.

Academic Misconduct

The academic enterprise is founded on honesty, civility, and integrity. Violations of academic integrity (i.e., academic 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 may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred for consideration for academic discipline. Careful records are kept to monitor and prevent recurrences. Any instance of cheating or taking credit for someone else's work, whether intentionally or unintentionally, can and often will result in at minimum a grade of zero for the assignment, and these cases will be reported to the Head of the Department and Associate Dean Academic of the Faculty.

Student Service Resources:

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.

Safewalk

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

Web: www.security.ok.ubc.ca