



HES 336 001 (3 credits)  
Tissue Injury & Repair  
2023-2024 W2

Instructor: Jeff Thorburn CAT(C)  
Kevin Phillips CAT(C)  
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Office Hours: By Appointment **ONLY**  
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<u>Class times:</u>	Lecture	Tues, Thur	11:00am-12:30pm	EME 1101
	(KP)Lab L01	M	14:00-16:00	ART 186
	(JT) Lab L02	T	14:00-16:00	ART 186
	(JT) Lab L03	W	14:00-16:00	ART 186
	(KP)Lab L04	Th	14:00-16:00	ART 186

Lab Instructors:

Jeff Thorburn CAT(C)	<a href="mailto:jeff.thorburn@ubc.ca">jeff.thorburn@ubc.ca</a>	GYM 028
Kevin Phillips CAT(C)	<a href="mailto:kevin.phillips@ubc.ca">kevin.phillips@ubc.ca</a>	GYM 028

Teaching Assistants:

Megan Lance	<a href="mailto:mlance@mail.ubc.ca">mlance@mail.ubc.ca</a>
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**Office Hours:**

As Jeff and Kevin have substantial roles and commitments to the Athletics Department their office hours will be by appointment, based on their schedules. It is expected that students will adhere to requesting appointments to arrange a mutually beneficial time. It is **NOT acceptable** for students to ‘drop in’ unannounced to the training room to seek answers to questions surrounding HES 336 content.

**Academic Calendar Entry**

HES 336 (3) Tissue Injury & Repair

The mechanics of both injury and repair of muscular, connective and nervous tissue in acute and chronic conditions. Formerly offered as HMKN 336. Credit will be granted for only one of HES 336 or HMKN 336. [3-2-0]

*Prerequisite:* One of HMKN 391, HES 320.



## **Course Format**

The course combines both lecture and laboratory sessions to achieve the learning objectives. The lectures will focus on concepts and principles underpinning the study of tissue injury and repair. Special topics on movement screening, assessment and corrections will be discussed, as well as key special topics that are ‘hot topics’ in the literature today.

Laboratory activities specifically address the practical application of functional anatomy, mechanism of injury, assessment, and the rehabilitation and bracing of key injuries to relevant body areas. In addition, laboratory activities focus on clinical standards of measurement.

Activities including discussions, practical experiences, and evaluations will provide the optimal learning environment for students and require student participation.

## **Course Overview, Content, and Objectives**

This course examines the mechanics of both injury and repair of muscular, connective, and nervous tissue. Common treatment and management, as well as, current research in tissue healing will be addressed. Both acute and chronic conditions will be discussed and examined. Athletic, sport & exercise injury management, and the fields of Athletic Therapy & Athlete Health will be discussed. Students will learn basic assessment and bracing/taping techniques and will be introduced to the principles of rehabilitation.

## **Learning Outcomes**

Upon completion of this course, successful students will:

1. Understand the biological processes of tissue injury and repair for various musculoskeletal structures
2. Understand the signs and symptoms associated with clinical presentation of common lower extremity, upper extremity, pelvis, lumbar spine, and abdominal injuries.
3. Understand the association between pain and tissue damage and healing processes
4. Understand and utilize functional anatomy and palpation to evaluate orthopedic injuries and conditions (using the HOPS principles)
5. Development of palpation skills for the upper extremity, lower extremity, and pelvis
6. Apply prophylactic taping and bracing to minimize injury risk or promote healing



# Evaluation Criteria and Grading

Lecture: (60%)

Midterm Examination 1 February 13<sup>th</sup> 25%

Non-cumulative (consists of MC/Short answer/Long answer)  
Mechanisms & Characteristics of Musculoskeletal Trauma – Tendons, Ligaments, Bone - (LO1, LO2)

Weekly quizzes (10) Various dates 10%

There will be 8 quizzes in total, 4 before the midterm and 4 after the midterm. Each quiz will contain 10-15 multiple-choice questions based on material from the previous week's lectures. The quizzes will be timed based on the number of questions at 2 minutes/questions (i.e., a 10-question quiz will have a 20-minute time limit). The content for these quizzes will be drawn from lecture slides or talking points within the lecture or any supplemental videos that are required to be watched. Quizzes are "open book" and "open note" as you may refer to your notes and/or book (either paper or electronic format) during quizzes; however, you are strictly prohibited from recording or taking screenshots of quizzes and from sharing quiz content with other students (see section on *Academic Integrity* for more details).

Final Examination During Exam Period 25%

*(cumulative, with focus on material post-midterm)*  
Cumulative with a focus on mechanisms & characteristics of muscle trauma-specific injuries, physiological and functional Consequences of Injury, injuries to the upper and lower extremity, trunk/thorax, and screening tools (consists of MC/Short answer/Long answer)  
(LO1, LO2, LO3)

Laboratory: (40%)

Midterm Practical week of February 26<sup>th</sup> 15%

This evaluation component will take place throughout the week of February 28, 2022. The teaching assistants will provide a schedule for evaluation. It is the student's responsibility to ensure that they are evaluated during this week.

This evaluation will cover assessment, injury management and taping/bracing of the LOWER BODY. All students will be required to complete the CLOSED BASKETWEAVE ankle taping, as well as one additional component (injury assessment using HOPS, a second taping procedure, bracing of a joint/injury). This will be a timed exam. (LO3, LO4, LO5, LO6)



## Pre-Lab Quizzes

due every Monday of lab week 10%

There will be one quiz for each lab (excluding Lab #8) plus 2 review quizzes (one for the first half of the course (labs 1-4) and one for the second half (labs 5-8)). Lab #8 will require you to complete an online concussion module, CATT. This will total 9 quizzes for the year each worth 1% of your final grade plus 1% for completion of the CATT. Quizzes will consist of roughly 10 questions of varying styles (e.g., multiple choice, fill-in-the-blank, hot spot identifiers, etc.). Quizzes will be timed; you will have ~20min to complete each quiz (average of 2min/question). Each Quiz will open on Thursday afternoon and be available until 1:59 pm PST the following Monday. The content of these quizzes will be drawn from your lab manual and any pre-lab videos/readings which assures that you have prepared and reviewed the pertinent information in advance of each lab session. Quizzes are “open book” and “open note” as you may refer to your notes and/or book (either paper or electronic format) during quizzes; however, you are strictly prohibited from recording or taking screenshots of quizzes and from sharing quiz content with other students (see section on *Academic Integrity* for more details).

## Final Practical

week of April 8<sup>th</sup> 15%

This evaluation component will take place during the week of April 11<sup>th</sup>, 2022. The teaching assistant will provide a schedule for evaluation. It is the student’s responsibility to ensure that they are evaluated during this week.

This evaluation will cover assessment and taping/bracing of the ANY of the lab experiences. This will be a timed exam. (LO3, LO4, LO5, LO6)

*Please note that you must complete ALL assignments and exams, AND receive a passing grade in the combined exam mark and in the combined assignment mark OR the lab and lecture part of the course to pass this course.*

### Required Readings and Videos

There is no required textbook for HES 336. It is suggested that students access an Athletic Therapy textbook for their specific needs throughout the course and as a resource for student presentations. Readings will be provided throughout the course to complement lecture material.

### Suggested Readings:

Prentice (2021) Principles of Athletic Training. 17th Edition McGraw-Hill (older editions are acceptable)

Magee (2013) Orthopedic Physical Assessment. 6<sup>th</sup> Edition Elsevier-Health Sciences Division (older version acceptable)

Biel A (2014) Trail Guide to the Body: A hands-on guide to locating muscles, bones and more Fifth Edition. Books of Discovery. (older editions are acceptable)

Perrin DH (2005) Athletic Taping & Bracing. Human Kinetics



Course Schedule (subject to change)

Lecture	Date	Lecture Topic	Lab
1	T Jan 9	Introduction	NO LAB
2	Th Jan 11	Mechanisms & Characteristics of Soft Tissue Trauma	
3	T Jan 16	Pathophysiology of Injury	Lab 1; Intro Lab
4	Th Jan 18	Mechanisms & Characteristics of Musculoskeletal Trauma- Tendons	
5	T Jan 23	Mechanisms & Characteristics of Musculoskeletal Trauma- Tendons	Lab 2; Assessment & Management of the Foot & Ankle
6	Th Jan 25	Mechanisms & Characteristics of Musculoskeletal Trauma- Ligaments	
7	T Jan 30	Mechanisms & Characteristics of Musculoskeletal Trauma- Ligaments	Lab 3; Assessment & Management of the Knee
8	Th Feb 1	Mechanisms & Characteristics of Musculoskeletal Trauma- Bone	
9	T Feb 6	Mechanisms & Characteristics of Musculoskeletal Trauma- Bone	Lab4; Assessment & Management of the Thigh, Hip & Groin
10	Th Feb 8	Review lecture	
11	T Feb 13	Midterm 1	Open Lab – Review Practical Midterm
12	Th Feb 15	Guest Lecture?	



13	T Feb 20	NO CLASS	No Labs – Reading Break
14	Th Feb 22	NO CLASS	
15	T Feb 27	Mechanisms & Characteristics of Musculoskeletal Trauma- Skeletal Muscle	PRACTICAL MIDTERM WEEK
16	Th Feb 29	Mechanisms & Characteristics of Musculoskeletal Trauma- Skeletal Muscle	
17	T Mar 5	Physiological & Functional Consequences of Injury; PAIN	Lab 5; Assessment & Management of the Shoulder
18	Th Mar 7	Physiological & Functional Consequences of Injury; PAIN	
19	T Mar 12	Conditions of the upper extremity	Lab 6; Assessment & Management of the Elbow & Forearm
20	Th Mar 14	Conditions of the upper extremity	
21	T Mar 19	Conditions of the upper/lower extremity	Lab 7; Assessment & Management of the Wrist & Hand
22	Th Mar 21	Conditions of the lower extremity	
23	T Mar 26	Conditions of the lower extremity	Lab 8; Concussion Evaluation
24	Th Mar 28	Concussion	
25	T Apr 2	Conditions of the trunk/thorax	NO LAB – OPEN LAB
26	Th Apr 4	Screening tools	
27	T Apr 9	Review	FINAL PRACTICAL WEEK
	Th Apr 11	Guest Lecture?	



## **Health and Exercise Sciences Undergraduate Program Policies**

Below is an overview of the policies we have in place for courses offered within the School of Health and Exercise Sciences. Please refer to the [UBC academic calendar](#) for full details on all of UBC's academic policies. You are responsible for being familiar with all policies as they apply to you and your situation. We also expect that as a future health professional you will uphold the highest standards of ethics and academic integrity and will not violate the [Expectations of Academic Integrity](#). At the same time, we want to support you as best as possible to succeed. There are many resources at UBC Okanagan so never hesitate to reach out.

Learning Environment Expectations: UBC and the School of Health and Exercise Sciences is committed to equity, human rights and respect for diversity. All members of the learning environment should strive to create an atmosphere of mutual respect and inclusion where all members of our community can express themselves, engage with each other, and respect one another's differences. We do not condone discrimination or harassment against any persons or communities. If students encounter any problems, these should be discussed with your instructors and/or teaching assistants. If problems persist or your concerns involve the instructor or TA, please reach out to the Director of the School ([tanya.fornieris@ubc.ca](mailto:tanya.fornieris@ubc.ca)) or the campus Ombudsperson ([ombuds.office.ok@ubc.ca](mailto:ombuds.office.ok@ubc.ca)).

### Academic Integrity Statement:

Doing your own work, acknowledging the contributions of others, and seeking help when you need it are all part of what academic integrity means at UBC, as is avoiding tools and services that subvert these practices.

Academic integrity is a commitment to upholding the values of respect, integrity, and accountability in academic work. It is foundational to teaching and learning and is a fundamental and shared value of all members of the UBC community. UBC adopts an educative approach to academic integrity that supports students and instructors around awareness and that values academic misconduct processes that are fair and effective.

Academic integrity is a set of values and skills that must be learned and refined over time. Instructors are responsible for setting clear expectations around academic integrity in their courses, modelling honest behaviour as teachers and scholars, and creating a space for students to develop their understanding of academic integrity. Students are responsible for meeting these expectations in their academic work, developing an understanding of concepts, and seeking support when they have questions. UBC is responsible for creating and sustaining the culture of academic integrity that makes all of this possible.

Everyone plays a part in supporting and enhancing academic integrity at UBC.

From: <https://academicintegrity.ubc.ca/about-academic-integrity/>



## Academic Concessions

In the School of Health and Exercise Sciences we care about your wellbeing and are committed to supporting you in reaching your academic goals. We understand that life can present unanticipated events or challenges (e.g., physical and/or mental health concerns, death of a family or close friend, sexual assault/misconduct, representing university at an event or provision of care to a family member). In such cases you may be eligible for an academic concession.

Requests for academic concession generally require documentation and you need to inform your instructor of any situation that may impact your academics as soon as they arise. However, there are a number of circumstances for which a self-declaration may be sufficient (e.g., when students experience an acute event that is expected to resolve within a week). In these cases, the School of Health and Exercise Sciences (HES) [Self-Declaration Form](#) can be completed in lieu of a medical note, certificate or official documentation for the following circumstances:

- Unforeseen Events: An acute illness that is likely to resolve without seeing a health professional or a traumatic event experienced by the student, a family member, or a close friend (e.g., sexual assault/misconduct, serious medical emergency, death).
- Conflicting Responsibilities: Life events that are scheduled beyond the student's control and normally arise after the student has registered in courses (e.g., representing university at an event, court appearance, military duty, provision of care to a family member).

**Note:** You may only submit a self-declaration request **once per term** and accommodations will not be considered for job interviews, volunteer commitments, travel/vacation plans, or work schedules. Students are expected to plan their personal affairs around their academic responsibilities. In some circumstances, you may still be required to submit supporting documentation along with, or following, your self-declaration. Please see the HES [Self-Declaration Form](#) for further information and conditions on the use of the Self-Declaration.

## Generative Artificial Intelligence (AI) Tools (e.g., ChatGPT)

A key expectation of academic integrity for students is completing their own work. Besides producing essays in seconds, generative AI has proven itself capable of completing multiple-choice exams and short answer questions.

The use of ChatGPT or other generative AI tools does not automatically equate to academic misconduct at UBC. At this time, the use of artificial intelligence tools is a *course-level decision* and there is no overall ban on its use in teaching and learning.

If using ChatGPT and/or generative AI tools on coursework has been **prohibited** by the instructor, then using these tools would be considered to be academic misconduct.

If using ChatGPT and/or generative AI tools has been **permitted** by the instructor, then instructors should make sure to convey the limitations of use and how it should be acknowledged and use should stay within those bounds.





If the use of ChatGPT and/or generative AI tools **has not been discussed** or specified by the instructor, then it is **likely to be considered as prohibited** as an example of the “use or facilitation of unauthorized means to complete an examination or coursework” and more specifically as “accessing websites or other online resources not specifically permitted by the instructor or examiner” (Discipline for Academic Misconduct, Vancouver and Okanagan 3.1.b.iv), and potentially plagiarism (3.1.e).

Students should not assume that all available technologies are permitted. If students are not sure about whether AI tools are allowed, as with any tool, they should ask their instructor for clarity and guidance.

### **Etiquette & Communication**

- Email communication must be professional and courteous with subject, your name, student number and course indicated. Doing so helps faculty members better respond to your concerns as many of our faculty teach multiple courses or hold multiple responsibilities with the school and across the campus. If this is not followed faculty members are not obligated to respond.
- Technology (computers and phones) may **ONLY** be used for course purposes during class/lab time. Students misusing devices will be asked to leave the room.
- All written communication, including exams, must be legible; if not, the instructor/teaching assistant is not obligated to read/mark it.
- If there are any concerns related to the course content or delivery, please communicate these concerns to the instructor in a professional manner to resolve them. If concerns remain unresolved you can bring your concerns forward by emailing [hes.undergrad@ubc.ca](mailto:hes.undergrad@ubc.ca).
- The course outline for any given course is **NOT** comprehensive. Dates, as well as small changes in content, dates of assessments may occur for unforeseen circumstances. In addition, instructors typically post the details regarding assignment expectations via Canvas. It is your responsibility to read all communications and documents posted via Canvas to remain aware of any changes throughout the course.
- Instructors should support a short movement break for every 50 minutes of class time.

### **Assignments and Exams**

- Assignments are due at the specified due date and time indicated on the course outline or Canvas. Individual course instructors will outline processes and penalties for late assignments within their individual courses. Please note that this may be different for each of your courses. It is expected that you will budget your time accordingly to avoid work overload and manage personal issues to meet academic performance requirements. Be aware of when your work is due, as it is common to have several exams and assignments due on the same day or within the same week. Ensure your name and student number are written on all assignments and exams.
- Writing final exams early is not permitted unless under exceptional circumstances approved by the undergraduate curriculum committee.



- It is your responsibility to uphold the highest standards of academic integrity. Unless otherwise authorized by your instructor you are **not** permitted to use course notes, texts, dictionaries, electronic devices or your peers. If there is a lack of clarity in any of your courses ensure you speak with your instructor for details.
- HES does not allow extra assignments to make up marks or increase a mark in a course.

**Lab Policies:**

- Attendance in laboratories is mandatory. Please check with individual course instructors on course-specific processes and penalties for missed labs. (If you do experience an extenuating circumstance, please submit the HES [Self-Declaration Form](#).)
- Attending a different lab section during a particular week, is only permitted under exceptional circumstances and needs to be discussed and arranged with your course instructor:
  - e.g., an extenuating circumstance or unanticipated commitment (e.g., student-athletes having a one-time absence for playoffs).
- Act in a manner that facilitates a positive learning environment; students who are disruptive to this will be asked to leave and will be considered absent from the lab.
- 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, yet your total grade is still above 50%, then your final grade will be 49%.



## **Student Service Resources**

### **UBC Okanagan Disability Resource Centre**

The Disability Resource Centre ensures educational equity for students with disabilities and chronic medical conditions. If you are disabled, have an injury or illness and require academic accommodations to meet the course objectives, please contact Earlene Roberts, the Disability Resource Centre Manager located in the University Centre building (UNC 214).

UNC 214C

email: [earlene.roberts@ubc.ca](mailto:earlene.roberts@ubc.ca)

Web: [www.students.ok.ubc.ca/drc](http://www.students.ok.ubc.ca/drc)

Phone: 250.807.9263

### **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 campus environments. UBC Policy 3 prohibits discrimination and harassment based on 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 216      250.807.9291

email: [equity.ubco@ubc.ca](mailto:equity.ubco@ubc.ca)

Web: [www.equity.ok.ubc.ca](http://www.equity.ok.ubc.ca)

### **Health & Wellness**

At UBC Okanagan health services to students are provided by Health and Wellness. Nurses, physicians, and counselors provide health care and counseling related to physical health, emotional/mental health, and sexual/reproductive health concerns. As well, health promotion, education, and research activities are provided to the campus community. If you require assistance with your health, please contact Health and Wellness for more information or to book an appointment.

UNC 337      250.807.9270

email: [healthwellness.okanagan@ubc.ca](mailto:healthwellness.okanagan@ubc.ca)

Web: [www.students.ok.ubc.ca/health-wellness](http://www.students.ok.ubc.ca/health-wellness)

### **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](http://www.security.ok.ubc.ca)*