

The University of British Columbia
SCHOOL OF KINESIOLOGY

KIN 420 (Formerly KIN 461) – Prevention of Athletic Injuries I
Term I, 2020

Course Format:

- Lectures will be delivered as a series of short pre-recorded videos that should be viewed prior to our live virtual sessions via Zoom.
- The class will be divided into two live sessions each week for discussions about assigned readings and material covered in the videos. You will be assigned to a live session at one of the following times:
 - Mondays, 5:00pm-5:50pm PST
 - Mondays, 6:00pm-6:50pm PST

Instructor:

Anne Lasinsky, PhD, MSc, MA

E-mail: anne.lasinsky@ubc.ca

Office Hours: By appointment, Thursdays 12:30pm-2:00pm PST

Teaching Assistants (TAs):

TA: Pat Wu

If your last name begins with the letters A through G, please communicate with Pat at your point of contact

You can contact Pat using the messaging function on Canvas or at: patwu@alumni.ubc.ca

Office Hours: by appointment

TA: Eloise Tribolet

If your last name begins with the letters H through N, please communicate with Eloise at your point of contact

You can contact Eloise using the messaging function on Canvas or at: eloise.tribolet@ubc.ca

Office Hours: by appointment

TA: Gabby Flemons

If your last name begins with the letters O through Z, please communicate with Gabby at your point of contact

You can contact Gabby using the messaging function on Canvas or at:

Office Hours: by appointment

COURSE OVERVIEW

Clinical sports medicine is a multidisciplinary field practiced by various registered clinical professions. Key skills of sports medicine clinicians include being able to make a diagnosis (based on a knowledge of sports injury epidemiology, appropriate physical tests, and investigations), deciding upon treatment with interpretation of the literature and the principles of 'evidence-based practice', and assisting athletes in returning to sport. The course covers common musculoskeletal injuries and prevalent disorders encountered in sports medicine.

COURSE TOOLS AND RESOURCES

There is no required textbook for this course. Reading materials are mostly published research articles available through the UBC Library website.

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Suggested Textbook:

Brunker & Khan's Clinical Sports Medicine, 5th Edition, Publisher: McGraw-Hill 2016

ISBN-10: 1743761384

ISBN-13: 978-1743761380

Canvas: Information about this course, lectures, and important reminders will be made available on the course website. This information can be accessed on Canvas, so please check the site regularly. *You are responsible for obtaining the information posted to Canvas.*

ATTENDANCE

You should plan to login for all of our live virtual sessions. You are responsible for all material covered in our virtual sessions and any information given whether you are present or not. You are also responsible for all of the content covered in our recorded lecture videos.

If you miss a quiz or exam without advanced notice and proper declaration, you cannot make up that assessment and will be given a mark of zero. If you have a reasonable academic concession request (medical issue, compassionate grounds, etc.), you should self-declare that, using the procedures outlined in the COURSE EVALUATION section of this course outline.

EMAIL

Attempting to teach or explain material over e-mail can be difficult and ineffective. **If you have questions about course material or concepts** (e.g. "I wasn't quite sure what you meant when you said..." or "Can you explain how that concept would work in this situation..."), **those questions should be addressed face-to-face (which, in the current circumstances, means during virtual office hours)**. I really encourage you to make use of office hours. Please seek clarification on course material in our virtual sessions or during office hours with the instructor or teaching assistant.

E-mail should be used for a limited number of reasons, including: scheduling a time to meet during office hours, in cases of emergency that may cause you to miss an exam or quiz, or situations otherwise detailed in class. It may take up to 24 hours to respond to your email during the week and I **do not** check my email on weekends, nor will your teaching assistant. Please keep this in mind around exam time. Please include "KIN 420" in the subject line of emails.

OFFICE HOURS

If you aren't comfortable speaking up during our live virtual sessions, questions about course material are best handled during virtual office hours (Thursdays, 12:30pm-2:00pm PST) with your Instructor or Teaching Assistant. If something is unclear, you should seek clarification within that week. Do not wait until the week before an exam to review material that was unclear weeks before. Office hours are a good option for seeking clarification or further understanding on course concepts. Setting up a meeting during office hours is also a good way to get to know your instructor or teaching assistant. If you are unable to meet during office hours, we may be able to schedule a different time to meet.

COURSE NOTES AND RECORDED LECTURES

Class notes and recorded lectures will be made available through the course website on Canvas. Please keep in mind that these notes and lectures do not contain information related to discussions or detailed examples, which will be covered in our virtual sessions.

You should have already viewed all previously recorded lectures and completed all assigned readings prior to logging into your weekly virtual session.

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COPYRIGHT

As the instructor, I hold the copyright to the lectures and all course materials presented in class, unless otherwise noted. The copyright also extends to student notes and summaries that substantially reflect these lectures or materials. Materials are made available to students for personal use only. Students may not distribute or reproduce the materials for commercial purposes without my express written consent. No classroom content should be posted to CourseHero or other similar websites.

UNIVERSITY POLICIES

It is your responsibility to become familiar with the University of British Columbia's Academic Honesty and Plagiarism Policies, as well as the Student Declaration and the consequences of violating these policies.

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here (<https://senate.ubc.ca/policiesresources-support-student-success>).

COURSE EVALUATION

The breakdown of marking for the course is as follows:

Quiz I:	10%
Midterm I:	30%
Quiz II:	10%
Quiz III:	10%
Quiz IV:	10%
Exam II:	30%

If an absence is anticipated before an assessment, please speak to your teaching assistant or instructor to discuss your personal situation **before you miss the class**. Exams will not be rescheduled for any reason other than self-declared medical circumstances, compassionate grounds, or conflicting responsibilities. Please review those policies here: <https://kin.educ.ubc.ca/undergraduate/bkin/academic-concession/>. Please keep in mind that things like vacationing are not a valid excuse to miss an assessment.

There is no individual extra credit in this course. Please keep that in mind from the beginning of the course. In the instance that an extra credit opportunity is made available, it will be made available to everyone in the class.

QUIZZES

There will be a series of four quizzes in the course. Quiz style may include, but is not limited to: multiple choice questions, labeling, fill-in-the-blank, and true/false questions. Quizzes will begin at the start of your assigned virtual session (either 5:00pm PST or 6:00pm PST). Quizzes will be conducted through Canvas. We will begin our virtual session at the end of your quiz to discuss the answers.

Each quiz is worth ten percent of your overall mark for the course. Details of individual quizzes will be discussed during the virtual session before the quiz. Missed quizzes are subject to the policies outlined in the section titled "Course Evaluation." In some circumstances, the value of a missed quiz may be re-weighted onto the other quizzes, but only in the case of self-declared conflicts.

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EXAMS

There are two exams in the course and each is worth 30% of your overall mark. Exam I will cover material presented in the first half of the course; Exam II will cover content covered in the second half of the course. Exam II is **NOT CUMULATIVE**. Exams will be a combination of multiple choice, true-false, and fill-in-the-blank questions. **Exams will take place through Canvas. Exam I will begin promptly at 5:00pm PST for all students on October 26th. The date of Exam II will be announced when the final exam schedule is posted.**

Students Learning Outside of Canada

During this pandemic, the shift to online learning has greatly altered teaching and studying at UBC, including changes to health and safety considerations. Keep in mind that some UBC courses might cover topics that are censored or considered illegal by non-Canadian governments. This may include, but is not limited to, human rights, representative government, defamation, obscenity, gender or sexuality, and historical or current geopolitical controversies. If you are a student living abroad, you will be subject to the laws of your local jurisdiction, and your local authorities might limit your access to course material or take punitive action against you. UBC is strongly committed to academic freedom, but has no control over foreign authorities (please visit <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,33,86,0> for an articulation of the values of the University conveyed in the Senate Statement on Academic Freedom). Thus, we recognize that students will have legitimate reason to exercise caution in studying certain subjects. If you have concerns regarding your personal situation, consider postponing taking a course with manifest risks, until you are back on campus or reach out to your academic advisor to find substitute courses. For further information and support, please visit: <https://academic.ubc.ca/supportresources/freedom-expression>.

COURSE SCHEDULE

Date	Class Content	Assessment	Readings
Sept. 14	Introduction + Syllabus Evidence Based Sports Medicine	--	2, 3, 26, 27, 28
Sept. 21	Therapeutic Exercise and Modalities	--	1, 25, 29, 30, 31
Sept. 28	Foot + Ankle Injuries	Quiz 1	4, 5
Oct. 5	Knee Injuries: Acute + Chronic Lower Leg Injuries	--	6, 7, 8, 22, 24
Oct. 19	Hip + Thigh Injuries Midterm Review	Quiz 2	9, 10, 11
Oct. 26	Exam I		
Nov. 2	Low Back + Spine Injuries Hand + Wrist + Arm	--	12, 13
Nov. 9	Shoulder Injuries: Acute + Chronic	Quiz 3	14
Nov. 16	Concussion Neck and Head Injuries	--	15, 16, 17, 19, 20, 21
Nov. 23	Injuries in the Pediatric Athlete Exam II Review	Quiz 4	
Nov. 30	Course Wrap Up		
TBD	Exam II		

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COURSE READINGS:

1. Khan, K. M., & Scott, A. (2009). Mechanotherapy: how physical therapists' prescription of exercise promotes tissue repair. *British journal of sports medicine*, 43(4), 247-252.
2. Khan, K. M., Cook, J. L., Kannus, P., Maffulli, N., & Bonar, S. F. (2002). Time to abandon the "tendinitis" myth: painful, overuse tendon conditions have a non-inflammatory pathology.
3. <https://fivethirtyeight.com/features/how-shoddy-statistics-found-a-home-in-sports-research/>
4. Olmsted, L. C., Vela, L. I., Denegar, C. R., & Hertel, J. (2004). Prophylactic ankle taping and bracing: a numbers-needed-to-treat and cost-benefit analysis. *Journal of athletic training*, 39(1), 95.
5. Kaminski, T. W., Hertel, J., Amendola, N., Docherty, C. L., Dolan, M. G., Hopkins, J. T., ... & Richie, D. (2013). National Athletic Trainers' Association position statement: conservative management and prevention of ankle sprains in athletes. *Journal of athletic training*, 48(4), 528-545.
6. Postma, W. F., & West, R. V. (2013). Anterior cruciate ligament injury-prevention programs. *JBJS*, 95(7), 661-669.
7. Moseley, J. B., O'malley, K., Petersen, N. J., Menke, T. J., Brody, B. A., Kuykendall, D. H., ... & Wray, N. P. (2002). A controlled trial of arthroscopic surgery for osteoarthritis of the knee. *New England Journal of Medicine*, 347(2), 81-88.
8. Sihvonen, R., Paavola, M., Malmivaara, A., Itälä, A., Joukainen, A., Nurmi, H., ... & Järvinen, T. L. (2013). Arthroscopic partial meniscectomy versus sham surgery for a degenerative meniscal tear. *New England Journal of Medicine*, 369(26), 2515-2524.
9. Sherry, M. A., & Best, T. M. (2004). A comparison of 2 rehabilitation programs in the treatment of acute hamstring strains. *Journal of Orthopaedic & Sports Physical Therapy*, 34(3), 116-125.
10. Verrall, G. M., Slavotinek, J. P., Barnes, P. G., Fon, G. T., & Spriggins, A. J. (2001). Clinical risk factors for hamstring muscle strain injury: a prospective study with correlation of injury by magnetic resonance imaging. *British Journal of Sports Medicine*, 35(6), 435-439.
11. Amason, A., Andersen, T. E., Holme, I., Engebretsen, L., & Bahr, R. (2008). Prevention of hamstring strains in elite soccer: an intervention study. *Scandinavian journal of medicine & science in sports*, 18(1), 40-48.
12. Cain Jr, E. L., Dugas, J. R., Wolf, R. S., & Andrews, J. R. (2003). Elbow injuries in throwing athletes: a current concepts review. *The American journal of sports medicine*, 31(4), 621-635.
13. Rettig, A. C. (2003). Athletic injuries of the wrist and hand. *The American journal of sports medicine*, 31(6), 1038-1048.
14. Ellenbecker, T. S., & Cools, A. (2010). Rehabilitation of shoulder impingement syndrome and rotator cuff injuries: an evidence-based review. *British journal of sports medicine*, 44(5), 319-327.
15. Swartz, E. E., Boden, B. P., Courson, R. W., Decoster, L. C., Horodyski, M. B., Norkus, S. A., ... & Waninger, K. N. (2009). National Athletic Trainers' Association position statement: acute management of the cervical spine-injured athlete. *Journal of athletic training*, 44(3), 306-331.
16. Sanders, R. J., Hammond, S. L., & Rao, N. M. (2007). Diagnosis of thoracic outlet syndrome. *Journal of vascular surgery*, 46(3), 601-604.

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17. Fugate, M. W., Rotellini-Coltvet, L., & Freischlag, J. A. (2009). Current management of thoracic outlet syndrome. *Current treatment options in cardiovascular medicine*, 11(2), 176.
18. Fitzpatrick, J., Bulsara, M., & Zheng, M. H. (2017). The effectiveness of platelet-rich plasma in the treatment of tendinopathy: a meta-analysis of randomized controlled clinical trials. *The American journal of sports medicine*, 45(1), 226-233.
19. Echemendia, R. J., Meeuwisse, W., McCrory, P., Davis, G. A., Putukian, M., Leddy, J., ... & Schneider, K. (2017). The sport concussion assessment tool 5th edition (SCAT5): background and rationale. *Br J Sports Med*, 51(11), 848-850.
20. Johnson, J. J., Loeffert, A. C., Stokes, J., Olympia, R. P., Bramley, H., & Hicks, S. D. (2018). Association of salivary microRNA changes with prolonged concussion symptoms. *JAMA pediatrics*, 172(1), 65-73.
21. Ashbaugh, A., & McGrew, C. (2016). The role of nutritional supplements in sports concussion treatment. *Current sports medicine reports*, 15(1), 16-19.
22. van der Vlist, A. C., Winters, M., Weir, A., Ardern, C. L., Welton, N. J., Caldwell, D. M., ... & de Vos, R. J. (2020). Which treatment is most effective for patients with Achilles tendinopathy? A living systematic review with network meta-analysis of 29 randomised controlled trials. *British Journal of Sports Medicine*.
23. Barker-Davies, R. M., O'Sullivan, O., Senaratne, K. P. P., Baker, P., Cranley, M., Dharm-Datta, S., ... & Norman, J. (2020). The Stanford Hall consensus statement for post-COVID-19 rehabilitation. *British Journal of Sports Medicine*.
24. Della Villa, F., Buckthorpe, M., Grassi, A., Nabiuzzi, A., Tosarelli, F., Zaffagnini, S., & Della Villa, S. (2020). Systematic video analysis of ACL injuries in professional male football (soccer): injury mechanisms, situational patterns and biomechanics study on 134 consecutive cases. *British journal of sports medicine*.
25. Lin, I., Wiles, L., Waller, R., Goucke, R., Nagree, Y., Gibberd, M., ... & O'Sullivan, P. P. (2020). What does best practice care for musculoskeletal pain look like? Eleven consistent recommendations from high-quality clinical practice guidelines: systematic review. *British journal of sports medicine*, 54(2), 79-86.
26. Caulfield, T., & Condit, C. (2012). Science and the sources of hype. *Public Health Genomics*, 15(3-4), 209-217.
27. Cassa Macedo, A., Oliveira Vilela de Faria, A., & Ghezzi, P. (2019). Boosting the immune system, from science to myth: analysis the Infosphere with Google. *Frontiers in medicine*, 6, 165.
28. Dwyer, J. T., Coates, P. M., & Smith, M. J. (2018). Dietary supplements: regulatory challenges and research resources. *Nutrients*, 10(1), 41.
29. Malanga, G. A., Yan, N., & Stark, J. (2015). Mechanisms and efficacy of heat and cold therapies for musculoskeletal injury. *Postgraduate Medicine*, 127(1), 57-65.
30. Mollon, B., da Silva, V., Busse, J. W., Einhorn, T. A., & Bhandari, M. (2008). Electrical stimulation for long-bone fracture-healing: a meta-analysis of randomized controlled trials. *JBJS*, 90(11), 2322-2330.
31. DeSantana, J. M., Walsh, D. M., Vance, C., Rakel, B. A., & Sluka, K. A. (2008). Effectiveness of transcutaneous electrical nerve stimulation for treatment of hyperalgesia and pain. *Current rheumatology reports*, 10(6), 492.

ADDITIONAL READINGS

1. Polaski, A. M., Phelps, A. L., Kostek, M. C., Szucs, K. A., & Kolber, B. J. (2019). Exercise-induced hypoalgesia: A meta-analysis of exercise dosing for the treatment of chronic pain. *PLoS one*, 14(1), e0210418.
2. Geneen, L. J., Moore, R. A., Clarke, C., Martin, D., Colvin, L. A., & Smith, B. H. (2017). Physical activity and exercise for chronic pain in adults: an overview of Cochrane Reviews. *Cochrane Database of Systematic Reviews*, (4).

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3. Campbell, K. L., Winters-Stone, K. M., Wiskemann, J., May, A. M., Schwartz, A. L., Courneya, K. S., ... & Morris, G. S. (2019). Exercise guidelines for cancer survivors: consensus statement from international multidisciplinary roundtable. *Medicine & Science in Sports & Exercise*, 51(11), 2375-2390.