

**MCMASTER UNIVERSITY**  
**Department of Kinesiology**

## Kinesiology 3K03: Sport Injuries

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### Fall 2017

Prof. Krista Madsen ([madsenk@mcmaster.ca](mailto:madsenk@mcmaster.ca))

IWC 215 – office hours will be posted on Avenue. If my door is open you are welcome to drop in and say hi. Appointments are usually best.

Lab Instructors: Sarah Ellis and Maggie Hitchon

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### A. DESCRIPTION

This course offers a theoretical and practical introduction to the recognition and care for common sports injuries. Content includes predisposing factors for injury, mechanisms of injury, clinical presentations, and the fundamentals of treatment for a variety of conditions affecting the head, spine, and extremities. Injury situations include emergency and non-urgent scenarios.

### B. OBJECTIVES

Successful students will be able to recognize and explain some of the causes of acute and chronic injuries of the upper and lower extremities, as well as head and spinal injuries. Successful students will also learn how to perform basic clinical or field tests for a variety of injured structures and be able to describe and perform basic and appropriate treatments. Successful students will be able to execute a selection of tape and tensor applications that can be used to protect an injury when an athlete returns to play.

### C. COURSE MATERIALS

- **\$20 lab supply fee** will be collected during the first week of term. This fee covers materials used during labs, and for take-home practice materials.
  - Lecture, lab and independent study materials will be posted on Avenue.
  - **MSK Anatomy course notes** (KIN 2E03) will be useful – recommended.
  - **Your MSK atlas from 2<sup>nd</sup> year** – recommended. Schuenke, M., Schulte, E., Schumacher, U. (2014). *Thieme Atlas of Anatomy: General Anatomy and Musculoskeletal System* (2<sup>nd</sup> ed.). New York, NY: Thieme Medical Publishers Inc.
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### D. THIS IS HOW WE DO THINGS

1. **Own your mistakes and learn from them – this is the key to progress.** Avoid judging yourself and/or blaming others. No great learning ever happens without challenge.
2. **Develop a mindset of growth and reflection.** Objectively examine what challenges you and reflect on why this is – finding a solution always begins with a clear understanding of the problem.
3. **Use a variety of relevant, valid, and reliable resources to support your learning.** Use critical thinking to evaluate them - don't be satisfied with any source of information.
4. **Be a question asker and seek answers independently** – If you are unfamiliar with a term, look it up and talk to your peers. We are here to guide you, but not always to "give" you answers.
5. **Communicate effectively and respectfully with your peers and instructors** – use clear and concise language. Use the tone of your voice respectfully and effectively. This is particularly important for testing.
6. **Learn cooperatively with your peers and instructors** – different perspectives are highly valuable and everyone has different strengths to offer.

### ALSO VALUABLE...

1. We may have met last year but please introduce (or re-introduce) yourself when you talk to me in class – I would like to get to know you. Do the same with your TAs.
  2. We work on a first name basis. **Please start emails with something like “Hi Krista” and finish with your name and a friendly/professional sign-off. Include the course code please.**
  3. Do your best to be mentally where you are physically.
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### E. CONTENT OUTLINE

#### Unit 1: September

In this unit we will introduce the assessment of urgent injuries. We will cover the mechanical and physiological factors that underpin head, spinal and neural injuries. Our focus will be on the “how” and “why” for each condition so that we have a foundation for sound clinical decision-making – these concepts will be built upon in units 2 and 3. The lab schedule is posted on Avenue. Some of the topics we will cover include:

- Concussion and post-concussion syndrome
- Second impact syndrome, intracranial hematomas, and chronic traumatic encephalopathy (CTE)
- Spinal trauma including fractures, dislocations, and transient quadriplegia
- Neural injuries such as brachial plexus neurapraxia
- Fractures – assessment, care and complications
- Eye, ear and other facial injuries/conditions

**Unit 2: October to November**

In this unit we will introduce the fundamentals of non-urgent injury assessment and the tissue healing process before we move into specific conditions affecting the lower extremity. For each condition we will examine the mechanisms of injury, clinical presentation, and introduce the fundamentals of specific injury care. Our goal is to be able to collect and interpret assessment data to form an index of suspicion with differential diagnoses, and determine a course of action. Some of the topics we will cover include:

- Testing principles, include range of motion and strength evaluation
- Developing an index of suspicion and differential diagnoses
- Foot – Turf toe and Plantar Fasciitis
- Ankle – Ligament sprains and associated injuries
- Medial tibial stress syndrome and Plantarflexor conditions
- Knee – ligamentous and meniscal injuries, extensor mechanism pathologies (such as patellar tendinopathy) and ITB syndrome

**Unit 3: November to December**

In this unit we will continue to develop our clinical assessment skills, now applied in the context of select upper extremity conditions. We will continue to fine tune our clinical reasoning skills and build on practical skills introduced in the last unit. Some of the conditions we will cover include:

- Shoulder girdle injuries including AC joint separations and clavicle fractures
- Glenohumeral instability – subluxations and dislocations
- Subacromial and Posterior Internal impingement syndromes
- Elbow – sprains, dislocations and Valgus Extension Overload syndrome
- Medial and lateral epicondylalgia
- Compression neuropathies in the forearm and hand
- Injuries to the wrist and hand such as tears of the Triangular Fibrocartilage Complex

## F. LABS/PRACTICAL CLASSES

**Shorts, exercise pants, and t-shirts are recommended for practical classes/labs.**

Other clothing is also acceptable as long as it will not hinder practice of the required lab skills. Accommodation can be provided; please contact your lab instructor or me directly if you wish to discuss privately.

## G. EVALUATION

Locations for all tests will be posted on Avenue.

Test 1	25%	Friday September 29 <sup>th</sup> , 4:30pm to 6pm
Practical Test	7.5%	<b>In lab</b> – Oct 19, 20, 26 and 27
Test 2	30%	Friday November 10 <sup>th</sup> , 4:30pm to 6pm
Practical Test 2	7.5%	<b>In lab</b> – Nov 16, 17, 23 and 24
Final Exam	30%	Scheduled by the Registrar

## H. POLICY REGARDING DEFERRED TESTS AND EXAMS

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar "Requests for Relief for Missed Academic Term Work". **Please note these regulations have changed and are effective Fall 2015.**

If you use the MSAF you must report your absence to me by email **within 2 working days** in order to request accommodation ([madsenk@mcmaster.ca](mailto:madsenk@mcmaster.ca)). If you fail to do so you may forfeit your opportunity for accommodation and receive a score of zero on your evaluation.

Students who miss Test 1 or Test 2 for legitimate reasons such as illness will be accommodated with a deferred test - I will confirm a test date and communicate this with you by email. **Students who miss a practical test** will be scheduled a deferred practical test tentatively **scheduled for December.**

Students who miss a Registrar-scheduled final exam can apply to the Associate Dean's office for permission to write in the deferred final exam schedule. In all cases, appropriate documentation must be submitted to the Office of the Associate Dean, Faculty of Science, for consideration of deferred examination permission. Under no circumstances will the instructor re-schedule a final exam for individual students.

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## **I. USE OF COURSE MATERIALS**

Course materials provided by the instructor are for use by students registered in this class only. Under no circumstances are these materials to be shared, posted or sold to a third party without permission from the instructor. This includes, but is not limited to, online posting of instructor provided lecture/lab notes, online lectures, recordings of lectures, or any lab materials on a website other than the Avenue site designed for the course.

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## **J. ACADEMIC INTEGRITY**

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences (e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript reading "Grade of F assigned for academic dishonesty", and/or suspension or expulsion from the university). It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at:

<http://www.mcmaster.ca/univsec/policy/AcademicIntegrity.pdf>

The following illustrates only three forms of academic dishonesty: plagiarism (e.g. the submission of work that is not one's own or for which other credit has been obtained), inappropriate collaboration on group work, copying or using unauthorized aids in tests and examinations.

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## **K. ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES**

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140, ext. 2865 or e-mail [sas@mcmaster.ca](mailto:sas@mcmaster.ca). For further information, consult McMaster University's Policy for Academic Accommodation of Students with Disabilities.

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## **L. ON-LINE LEARNING RESOURCES**

Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

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## **M. MODIFICATIONS TO COURSE**

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

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## **N. FEEDBACK**

It really helps us improve our services when we hear from our students, faculty and staff about what we can do better. A feedback process brings to our attention situations in which we may not have adequately considered accessibility and allows us to better plan for accessibility in the future.