

Fall 2015
Introduction to Sport Science

Lecturers:	Staff at the Canadian Sport Institute Ontario
Course coordinator:	Adjunct Professor, Dr. Heather Sprenger (hsprenger@csiontario.ca)
Tutorial assistant:	Roxanne Fournier
Lectures:	Wednesday 1:00-3:00pm
Tutorials (3 total):	
Office hours:	By appointment
Prerequisites:	
Required Readings:	Appointed journal articles will be provided prior to lectures and tutorials

Course Description

A lecture/discussion course that examines the components of sport science to optimize athlete adaptation and performance. This course will place an emphasis on topics such as: physiological adaptations to athletic training; energy system development; monitoring athlete progress; sport biomechanics and its applications to improve athlete performance; the role of strength & conditioning in athlete development; nutrition for peak performance and recovery; sports medicine support for elite athletes; and psychological factors impacting performance.

Evaluation

Midterm test	25% (On lecture and tutorial materials, including required readings, <u>up to test date</u>)
Tutorial Assignments	20% (Due at the start of the next lecture after the tutorial was completed. Penalty for late submission is 10% per day of maximum mark available for assignment)
Laboratory participation	15%
Final exam	40% (<u>Cumulative</u> , on all lecture/tutorial materials, but with emphasis on post-midterm material)

Lecture Schedule

Week	Lecture		Tutorial
1	Introduction to the Course	Dr. Heather Sprenger	CSIO Site Visit
2	Physiological Adaptations to Exercise Training	Dr. Heather Sprenger	
3	Energy Metabolism	Dr. Heather Sprenger	
4	Environmental Physiology	Dr. Heather Sprenger	
5	Introduction to Sport Biomechanics	Devon Frayne/Will George	
6	Applying Biomechanics to Improve Athlete Performance	Carolyn Taylor	CSIO Practical Lab – Data Collection
7	Methodologies of Sport Strength & Conditioning	Chris Chapman	
8	Strength & Conditioning for Various Sports	Chris Chapman	
9	Sport Medicine – Assessing & Monitoring Athlete Health	Kylie Gibson	Data Interpretation & Prescription
10	Sports Nutrition for Training	Nicole Springle	
11	Performance Nutrition & Recovery	Nicole Springle	
12	Psychological Factors Impacting Athlete Performance	Dr. Judy Goss	
13	Summary: Athlete Monitoring	Dr. Heather Sprenger	

Tutorials

There will be a tutorial during week 2, 6, and 10. Each tutorial that is scheduled will run for up to 2 hours. The tutorial will have a structured format in which ideas, opinions, data, and interpretation of the topic can be discussed. Students will be divided into groups. Each student is expected to participate and contribute, and therefore will be expected to have (minimally) read the required readings. Marks will be assigned for participation in tutorials.

Tutorial Schedule – Dates TBD

- (1) Site visit of the Canadian Sport Institute Ontario (CSIO)**
- (2) Practical Laboratory at CSIO**
Please come prepared to participate in physical testing. Ensure you bring with you indoor running shoes, shorts, and a t-shirt. This laboratory will happen in the CSIO Sport Lab. More details to follow.
- (3) Data Interpretation & Prescription – classroom TBD**
Data collected in tutorial #2 will be analyzed and interpreted. The student will then learn how to use this data to prescribe training.