

**Fall 2016**  
**BIOD35 - Sport Science**

**Lecturers:** Staff at the Canadian Sport Institute Ontario  
**Course coordinator:** Dr. Heather Sprenger ([heather.sprenger@utoronto.ca](mailto:heather.sprenger@utoronto.ca)) OR  
hsprenger@csiontario.ca)

**Tutorial assistant:**

**Lectures:** Wednesday 1:00-3:00pm  
**Tutorials (2 total):** Wednesday 3:00-4:00pm, 4:00-5:00pm  
**Laboratories (3 total):** Wednesday 3:00-4:00pm, 4:00-5:00pm  
**Location:** Canadian Sport Institute Ontario (CSIO), 875 Morningside Avenue, Suite 101, Toronto, ON

**Office hours:** CSIO Suite 101. By appointment only.

**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** **30%**  
(On lecture and tutorial materials, including required readings, up to test date)

**Tutorial Assignments** **15%**  
(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 & Report** **15%**

**Final exam** **40%**  
(Cumulative, on all lecture/tutorial materials, but with emphasis on post-midterm material)

## Lecture Schedule

Date	Topic	Lecturer
Sept 7 <sup>th</sup>	Course Introduction	Dr. Heather Sprenger
Sept 14 <sup>th</sup>	Physiological Adaptations to Exercise Training	Dr. Heather Sprenger
Sept 21 <sup>st</sup>	Energy Metabolism	Dr. Heather Sprenger
Sept 28 <sup>th</sup>	Environmental Physiology	Devon Frayne
Oct 5 <sup>th</sup>	Applying Biomechanics to Improve Athlete Performance	Carolyn Taylor
Oct 19 <sup>th</sup>	Methods of Sport Strength & Conditioning	Chris Chapman
Oct 26 <sup>th</sup>	Midterm Exam – In-class	
Nov 2 <sup>nd</sup>	Sports Nutrition for Training	Nicole Springle
Nov 9 <sup>th</sup>	Performance Nutrition & Recovery	Dr. Heather Sprenger
Nov 16 <sup>th</sup>	Sports Medicine – Assessing & Monitoring Athlete Health	Kylie Gibson
Nov 23 <sup>rd</sup>	Psychological Factors Impacting Athlete Performance	Dr. Rolf Wagschal
Nov 30 <sup>th</sup>	Summary: Athlete Monitoring	Dr. Heather Sprenger
Dec 7 <sup>th</sup>	Exam Period	

## **Tutorials**

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 & the submission of the tutorial report.

The dates of the Tutorials are below:

### **2 Tutorial Times:**

1. October 19<sup>th</sup>
2. November 23<sup>rd</sup>

## **Lab Schedule – All labs will be in the CSIO Sport Laboratory**

- (1) September 21<sup>st</sup> – Assessing Aerobic Capacity
- (2) October 5<sup>th</sup> – Physiological Responses to Simulated Altitude
- (3) November 9<sup>th</sup> – Assessing Body Composition & Estimating Energy Expenditure

Students will be in designated lab sections. The instructor will provide the lab sections in the first week of lecture. 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.