



HK 376 Biomechanics – Course Syllabus
Department of Human Kinetics
Saint Francis Xavier University



Instructor: Dr. Sasho Mackenzie e: smackenz@stfx.ca web: people.stfx.ca/smackenz/
Office: Rm 211, ESC Office hours: Tues. 8-9 am; Thurs. 8-9 am; Fri. 8-10 am
Course time: A Block
Text: McGinnis, Peter M., Biomechanics of Sport and Exercise 3rd Ed.

Course Objectives:

- a. To encourage students in biomechanics to develop an analytical problem solving approach that utilizes a systematic chain of reasoning based on the premises established by Newton.
- b. To provide the mechanical information necessary to enable the student to objectively criticize the sport technique involved in any athletic event which the student may one day have to teach or coach. Specifically, the student will be required to:
 - i) understand and apply Newton's laws of motion as they apply to human movement.
 - ii) understand and apply the 'free body diagram' concept to the analyses of human motion.

Evaluation:

**Marks for missed quizzes will be redistributed over other quizzes*

Quiz #1	30 %	Tuesday, October 9
Quiz #2	30 %	Tuesday, November 13
Lab Quiz	20 %	Tuesday, November 27
Labs/Assignments	20 %	
<u>Bonus Questions</u>	<u>15 %</u>	(potentially add an extra 15% onto your final grade)
Total	100 %	

Labs:

Eight, 3-hour labs will be held throughout the term in Rm 7 in the Exercise Science Center. Please refer to the schedule provided on the class webpage for specific dates and lab content.

Assignments:

Six assignments will be administered. **Neither the Lab Instructor nor the Professor will provide help with assignments solutions prior to their evaluation.** We will clarify what is being asked. Solutions to every assignment question will be posted on the due date.

Bonus Questions:

Bonus questions will be posted on Moodle. During the time period allotted you will have an unlimited number of attempts to correctly answer each question. Bonus questions come from the same pool as assignment and quiz questions. If you meet the following criteria, then the formula below (see 3.) will be used to calculate your bonus, up to a maximum of 15%.

1. You've correctly answered every bonus question and **submitted** them on time.
2. You've completed and passed in all assignments on time and you've attended every lab.
3. $Bonus = 15 * ((91 - Old\ Final\ Grade) / 55) \dots$ $New\ Final\ Grade = Old\ Final\ Grade + Bonus$
4. E.g., 35→50, 45→58, 50→61, 62→70, 69→75, 80→83, 89→90, 90→90, 95→95