

# School of Arts & Science PHYSICS DEPARTMENT

PHYS 160 The Biomechanics of Sport Winter 2010

### 1. Instructor Information

(a)	Instructor:	Julie Alexander, BSc, MSc, PhD.
(b)	Office Hours:	M – Th 12:30-1:30
(C)	Location:	Tech 220
(d)	Phone:	250-370-4437
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(f)	Website:	http://web.uvic.ca/~jalexndr

Web site contains: course schedule with assigned readings from text, homework problems, lecture notes and other supplemental material.

Class Meetings: Lecture		M, T, W, Th	10:30-11:20	ТВА
-	Lab:	Th.	3:30-5:20	Tech 222

## 2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

- 1. Understand the terms and concepts used in describing human movement;
- 2. Understand the physical laws and mechanical aspects governing human movement;
- 3. Develop a basic understanding of how these physical laws affect human performance;
- 4. Learn how to analyze and solve simple qualitative and quantitative problems in the biomechanics of human movement;
- 5. Synthesize, apply, and demonstrate this learning through biomechanical analyses performed in laboratory sessions, in lecture, and as homework.

#### 3. Required Materials

- (a) Texts Hall, Susan J (2007). <u>Basic Biomechanics</u> (5<sup>th</sup> edition) Boston: McGraw-Hill.
- (b) Other Physics 160 Laboratory Manual Calculator (Sharp 531)

#### 4. Term test dates

There will be four 1 hour term tests on Jan. 27, Feb. 17, Mar. 11 and Mar. 31

#### 5. Basis of Student Assessment (Weighting)

The student must be successful ( $\ge$  60%) in both the theory and laboratory assignments to pass the course. The approximate percentages used for the final grading are:

Term tests and other work	50%	
Lab Reports (completion required)		
Final Exam (3 hours)	50%	

#### PHYSICS DEPARTMENT POLICIES REGARDING TESTING:

- The final exam will cover the entire course and will be 3 hours long. As stated in the current college calendar on page 39, "students are expected to write tests and final exams at the scheduled time and place." Exceptions will only be considered due to emergency circumstances as outlined in the calendar. Holidays or scheduled flights are not considered to be emergencies.
- 2. Instructors are not required to provide make-up tests. At their discretion, instructors may waive a test or provide a make-up test only in the event of documented illness or other extenuating circumstances.

#### PHYSICS DEPARTMENT POLICIES REGARDING LABS:

- Lab exercises will be done on a bi-weekly basis during the scheduled lab period. Attendance is mandatory and you will be required to "sign in" at the beginning of each one. As you complete the exercise your instructor will discuss your results with you and mark your work.
- All assigned laboratory exercises and reports must be completed and handed in prior to the date of the final exam with an overall grade of 60% in order to obtain credit for the course. A lab may be waived or made up at a later time only in the case of documented illness or other extenuating circumstances. If you will be absent from a lab period due to illness it is your responsibility to notify your instructor.
- 3. At the discretion of the instructor, a student who is repeating this Physics course may apply for lab exemption.

### 6. Grading System

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	А		8
80-84	A-		7
77-79	B+		6
73-76	В		5
70-72	B-		4
65-69	C+		3
60-64	С		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

## Standard Grading System (GPA)

## **Temporary Grades**

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete</i> : A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress</i> : A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. (For these courses a final grade will be assigned to either the 3 <sup>rd</sup> course attempt or at the point of course completion.)
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

#### 7. Chapters covered in text

- Chapter 1 What is Biomechanics?
- Chapter 2 Kinematic Concepts for Analyzing Human Motion
- Chapter 3 Kinetic Concepts for Analyzing Human Motion
- Chapter 10 Linear Kinematics of Human Movement
- Chapter 11 Angular Kinematics of Human Movement
- Chapter 12 Linear Kinetics of Human Movement
- Chapter 13 Equilibrium and Human Movement
- Chapter 15 Human Movement in a Fluid Medium

### 8. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at <u>camosun.ca</u>.

## STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.