CAMOSUN COLLEGE	***School of Arts & Science*** ***BIOLOGY DEPARTMENT*** **BIOL 142** **Physiology for Sport Education** **Quarter 2 Winter 2007**

COURSE OUTLINE

CALENDAR DESCRIPTION

This course provides an overview of functional relationships within the human body. Physiological processes are studied at both the cellular and organ system level, with an emphasis on homeostasis as it relates to exercise, health and disease. This course is designed for students in Exercise and Wellness, Sport Management and Athlete and Coach Development Diploma programs, as well as Allied Health Programs.

PREREQUISITES

Grade of C+ or better in English 12, Grade 11 level science, Math 11

1. Instructor Information

(a)	Instructor:	Peggy Hunter		
(b)	Office Hours:	TBA		
(c)	Location:	F246C		
(d)	Phone:	370-3427	Alternative Phone:	
(e)	Email:	hunterp@camosun.bc.ca		
(f)	Website:	http://hunterp.disted.camosun.bc.ca		

2. Intended Learning Outcomes

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

1. Describe the concept of homeostasis and explain how it operates in the major physiological systems of the human body.
2. Describe the functioning of the major physiological systems of the human body at the cellular and systemic levels.
3. Explain the interactions between the major physiological systems of the body particularly as these interactions pertain to sport performance and health.
4. Relate how physiological processes are altered in injury or disease.
5. Apply anatomical vocabulary in a physiological context.
6. Perform laboratory procedures relevant to physiology (observe physiological phenomena, measure physiological data, organize / record / analyze results of physiological experiments).

3. Required Materials

Texts	Essentials of Anatomy and Physiology (3rd edition), Martini, F. and Bartholomew, E. (2007).

4. Course Particulars and Schedule

Class hours: 3 hrs lecture/week
Out of class: 6 hrs/week minimum
Credits: 3 credits

The following schedule is a tentative outline of lectures and laboratories. It is subject to change as the need arises. Changes will be announced in class.

WEEK/DATE	LECTURE TOPIC
1. Jan 8–14	Intro to Cellular physiology • homeostasis • organic molecules / nutrition • cell membranes • transport mechanisms • enzymes
2. Jan 15–21	Digestive Physiology • chemical digestion - enzymes • absorption - chemicals, routes, locations • neural and hormonal controls • gastrointestinal function during exercise
3. Jan 22–28	Metabolism • carbohydrate metabolism • lipid and protein metabolism • interconversion of molecules • energy transfer in exercise • absorptive and post absorptive states, hormonal control
4. Jan 29–Feb 4	Neural Physiology and Integration • reflex pathways • membrane potentials • synapse and neurotransmitters neural integration
5. **Feb5 –11** **Feb 8, 9**	**MIDTERM 1** **READING BREAK**
6. Feb 12–18	Sensory Reception • general senses • theories of smell, taste, vision and hearing
7. Feb 19–25	Muscle Physiology • neuromuscular junction • sliding filament contraction theory • gross muscle physiology • comparison of smooth, skeletal and cardiac physiology
8. Feb 26–Mar 4	Endocrine Physiology Cardiovascular Physiology • ECG (action potentials) • cardiac cycle and controls
9. Mar 5–11	Cardiovascular Physiology continued • blood flow / blood pressure capillary exchange

10. Mar 12–18	Hematology • erythrocyte cycle • hemostasis MIDTERM 2
11. Mar 19–25	Immunology • non-specific -mechanical, chemical, cells, complement -inflammatory response • specific - lymphocyte activation and inhibition - antibody mediated immunity - cell mediated immunity - acquired immunity
12. Mar 2–April 1	Respiratory Physiology • ventilation • lung volume and capacities • gas laws and diffusion • blood flow/gradients (O2/CO2)
13. Apr 2–8	Renal Physiology • filtration/reabsorption /secretion • fluid/electrolyte balance • acid/base balance
14. Apr 9–15	Reproductive Physiology • spermatogenesis and oogenesis • regulation of reproduction • regulation of pregnancy/parturition and lactation
Apr 16–24	**FINAL EXAM**

5. Grading System

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
95-100	A+		9
90-94	A		8
85-89	A-		7
80-84	B+		6
75-79	B		5
70-74	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

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 at **camosun.ca** or information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	*Incomplete*: 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	*In progress*: A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	*Compulsory Withdrawal:* 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.

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.

6. Basis of Student Assessment (Weighting)

Weekly Quizzes	15%
Assignments	15%
Lecture midterm 1	20%
Lecture midterm 2	20%
Final	30%
	100%

7. 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 camosun.ca.

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.

Student Responsibilities

1. Students are expected to hand in any required assignments on time. Assignments are due at the **beginning** of the class period on the due date. Assignments not handed in at the beginning of class will be considered late, for which there is a 10% penalty/day.

2. Attendance correlates highly with academic success. If unable to attend a lecture or lab session, the student is responsible for arranging with a classmate to obtain information such as notes, handouts and announcements.

3. Examinations must be written as scheduled except in the case of illness or emergency. The student must notify the instructor **in advance** of the examination. Documentation acceptable to your instructor is required to schedule a make-up exam.

4. Any evaluation of work for in-class/lab assignments, reports and/or participation will not be given if a student is not present for any reason.

5. Weekly quizzes will be written at the beginning of every class; if you are late for class you will not be allowed to write the quiz

6. Students are expected to work independently on assignments unless instructed that the evaluation is based on group effort. Please see ACADEMIC MISCONDUCT.

Concerning spelling

Mastering the usage of anatomical and physiological terminology will be important to you for several reasons. Correct usage (pronunciation and spelling) will

- Foster self confidence
- Help to earn the respect of your professional colleagues
- Reduce the chances of practical mistakes which may cause harm or embarrassment. Consider the difference between the terms **peroneal** and **perineal**

You will be expected to use acceptable pronunciation and correct spelling for presentations, assignments and exams. **Penalties for spelling errors will be applied.** If writing is illegible, no marks will be given.