CAMOSUN COLLEGE	**School of Arts & Science** **BIOLOGY DEPARTMENT** **BIOL 151** **Human Physiology** **Winter 2017**

COURSE OUTLINE

The course description is online @ http://camosun.ca/learn/calendar/current/web/biol.html

- *Please note: the College electronically stores this outline for five (5) years only. It is **strongly recommended** you keep a copy of this outline with your academic records. You will need this outline for any future application/s for transfer credit/s to other colleges/universities.*

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1. Instructor Information

(a)	Instructor:	Jennifer Giuliani
(b)	Office Hours:	Mondays 10:00am – 12:00pm; 1:30-2:20pm Wednesdays 10:00am – 12:00pm *other times available by appointment
(c)	Office Location:	F352
(d)	Phone:	250-370-3445
(e)	Email:	GiulianiJ@camosun.bc.ca
(f)	Website:	D2L (go to https://online.camosun.ca/ to log in)

2. Intended Learning Outcomes

(No changes are to be made to these Intended Learning Outcomes as approved by the Education Council of Camosun College.)

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. Demonstrate an understanding of the functioning of the major physiological systems of the human body at the cellular and systemic levels.
3. Explain how the major physiological systems of the body interact to bring about biological behaviors.
4. Understand 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).
7. Utilize critical thinking to apply physiological concepts to specific problem solving situations.

3. Required Materials

Fundamentals of Human Anatomy and Physiology, 10th edition, Martini, Nath & Bartholomew, Pearson Education, 2015

*note: this is the same text that was used for Biol 150 Human Anatomy last semester

Lab Manual will be posted on D2L. More detailed information will be announced in class, and posted on D2L.

4. Course Content and Schedule

Section 001A/B	Section 002A/B
Lectures – in Y211 Mondays 3:00 – 4:20pm Wednesdays 3:00 – 4:20pm	Lectures – in F200 Mondays 8:30 – 9:50am Wednesdays 8:30 – 9:50am
Labs – in F244 Section 001A: Fridays 9:30am – 12:20pm Section 001B: Fridays 1:30 – 4:20pm	Labs – in F224 Section 002A: Tuesdays 9:30am – 12:20pm Section 002B: Tuesdays 1:30 – 4:20pm

A detailed, weekly course schedule can be found on the last pages of this course outline.

5. Basis of Student Assessment (Weighting)

Lab Assignments		10%
Lab Quiz (week 7)		5%
Lab Exam (week 12)		15%
Group Project/Presentation		10%
Lecture Assignments		5%
Lecture Midterm #1	(Feb. 8th)	15%
Lecture Midterm #2	(Mar 15th)	15%
Lecture Final Exam		25%

More detailed information on assignments, projects, and exams will be given in class.

6. Grading System

(No changes are to be made to this section unless the Approved Course Description has been forwarded through the Education Council of Camosun College for approval.)

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		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

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	*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, 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 3rd course attempt or at the point of course completion.)*
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.

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
http://camosun.ca/services/writing-centre/learning-skills.html

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 the College web site in the Policy Section.

General Information for Students

Physiology is about how things work. This subject requires more thought than Anatomy (memorization, however, is still needed). There are reasons that each topic is included in this course. These may not be obvious to you but you should ask yourself why. You should ask yourself lots of questions! You will be able to answer some just by thinking, many by reading, and others by talking to fellow students and occasionally, an instructor. Most of the really good questions have no answers so don't expect perfection. Asking questions will help you to understand as well as remember.

During the lab component of the course, you will work in small groups to perform demonstrations and experiments. These activities illustrate some of the topics that are covered during lecture and also give you experience in some aspects of experimentation. Group work is fundamental to the lab activities. Aim for equal (not necessarily identical) participation of all group members. Discuss individual responsibilities within the group and include the instructor in these discussions as needed.

My hope is that all students will get something useful out of this course. It is a requirement for a range of programs in the health professions. Aside from that, the topics can be related to many aspects of day to day life. Not only can it be intellectually satisfying to gain a deeper understanding of a subject but there can be added value if that understanding leads to modified behavior and increased quality of life.

Science is a cultural activity that only a small minority of people become directly involved in. Yet the advances in understanding that it yields affects us all in many ways. This course affords an opportunity to learn a little more about how scientific information is accumulated and used.

Attendance, Exams, and Submission of Assignments

It is expected that you will attend all lectures and labs. If you do miss a lecture, it is your responsibility to find out what you missed that day and get caught up. Attendance in the lab is required for completion of lab assignments. If you are unable to attend a lab, please contact your instructor as soon as possible to discuss possible arrangements.

Exams must be written at their scheduled time. This course will have two lecture midterms (scheduled and written during class time), one lab exam (scheduled and written during lab time) and one final exam (to be scheduled by the college registrar and written at the specified time during the final exam period). Please refer to the detailed course schedule for the dates and times of these exams. In particular, please wait until after the final exam schedule has been posted before booking and travel arrangements for the end of term. Ensure that your travel is scheduled for after the completion of your final exam for this class.

If you are unable to write a scheduled exam due to extreme, extenuating circumstances, you must contact your instructor as soon as possible, prior to the exam. Proper documentation will be required for alternate arrangements to be made.

All course assignments will have a specified due date. Be sure to submit all assignments on time to avoid deductions. Any assignments that are submitted after the due date/time will be received a 10% deduction per day late.

Some course assignments will be group work; most course assignments will be individual work. When submitting your own, individual assignment, be sure that it is your work and yours alone. This applies even if you are working with a study group! I do encourage you to study and work with other students, but the work that you submit must still be your own.

These course expectations and policies will be discussed during the first class. If you have any further questions, please contact your instructor.

Detailed Course Schedule: Biol 151 Winter 2017

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

Wk	Dates	Lecture Topics	Lab Activity
1	Jan 9-13	**Homeostasis** • positive and negative feedback **Cell Membranes and Transport** • review of organelles • membrane structure • types of transport (including osmosis)	Lab 1: Introduction to the physiology labs, scientific literature and chemistry review.
2	Jan 16-20	**Neural Physiology** • membrane potentials • action potentials in neurons • neurotransmitters and synapses • neural patterns and circuits, reflexes (in lab)	Lab 2: Movement of molecules
3	Jan 23-27	**Muscular System** • glucose metabolism • action potentials in muscle cells • muscle contraction • muscle physiology (cell and whole muscle)	Lab 3: Neural circuits and reflexes
4	Jan 30 - Feb 3	**Cardiovascular Physiology** • electrical activities in the heart • cardiac cycle and controls • blood flow, blood pressure, and capillary exchange	Lab 4: Muscle mechanics and EMG
5	Feb 6-10	**Cardiovascular Physiology (cont'd)** **Lecture Midterm #1:** Wed., Feb. 8th in class	Lab 5: Cardiovascular physiology
6	Feb 13-17	**Feb 13:** Family Day (College closed) **Feb 14 – 17:** Reading Break (no classes)	No Labs
7	Feb 20-24	**Cardiovascular Physiology (cont'd, if needed)** **Respiration** • ventilation and lung volumes • gas laws and diffusion • transport of gasses (O_2 / CO_2)	Lab Quiz (Labs 1-5) and Lab 6: Respiration and Buffering Capacity
8	Feb 27 - Mar 3	**Respiration (cont'd)** **Kidney & Renal Physiology** • filtration/reabsorption/secretion • micturition	Lab 7: Senses (*will include some lecture in lab time this week)

Detailed Course Schedule (cont'd)

Wk	Dates	Lecture Topics	Lab Activity
9	Mar 6-10	**Renal Physiology (cont'd)** • hormonal regulation of renal function • fluid, pH, electrolyte balance	Lab 8: Urinalysis
10	Mar 13-17	**Digestion** • chemical digestion (enzymes) • absorption • neural and hormonal controls **Lecture Midterm #2:** Wed., March 15th in class	Lab 9: Digestion
11	Mar 20-24	**Digestion (cont'd)** **Metabolic Physiology** • carbohydrate, protein, and lipid metabolism • absorptive and postabsorptive states **Endocrine and Hormonal Regulation** • hormones as chemical signals • mechanisms of hormone action • (start hematology)	Lab 10: Hematology, Endocrine System, and Immunology
12	Mar 27-31	**Hematology** • hemopoiesis and erythrocyte cycle • hemostasis **Immunology** • non-specific and specific defenses	Lab Exam (Labs 1-10 inclusive)
13	Apr 3-7	**Immunology (cont'd)** **Reproduction** • oogenesis and spermatogenesis • regulation of reproduction • regulation of pregnancy, parturition, and lactation	Presentations (details TBA!)
14	Apr 10-14	**Reproduction (cont'd)** Last lecture: topic TBA (time to wrap up any final course topics, integrating themes, etc.) **April 14:** Good Friday (College closed)	No labs
	Apr 18-26	**Final Exam – scheduled by registrar**	