

Biology 232B/C: Human Physiology – Syllabus for Spring 2018

(1) Course Information

- Sections: B/2082 (Monday labs) and C/2084 (Tuesday labs)
- Year and quarter: Spring 2018
- Schedule:
 - Lectures in Shuksan 145:
 - Mondays, 11:00-11:50am
 - Tuesdays and Thursdays, 10:00-11:50am
 - Labs in Shuksan 144:
 - Section B/2082: Mondays, 12:20pm to 2:10pm
 - Section C/2084: Tuesdays, 12:20pm to 2:10pm

(2) Instructor Information

- Instructor name: Gregory J. Crowther, Ph.D.
- Contact information:
 - Email: gcrowther@everettcc.edu (Canvas messages work too)
 - Office phone number: 425-388-9480 (note: I check voice-mail infrequently)
 - Website: <http://faculty.washington.edu/crowther/>
- Office location: Shuksan 118
- Office hours for this quarter:
 - Mondays, 2:30-4:00pm
 - Wednesdays, 10:30am-12:30pm
 - Thursdays, 1:00-2:30 pm
 - And by appointment

(3) Course Description*

Detailed study of the functioning, integration and interrelationships of the following organ systems of the human body using lecture and lab exercises: Neurologic (Including Autonomic and Special Senses), Muscular, Endocrine, Cardiac, Circulatory, Renal, Reproductive (including Pregnancy, Development, Growth and Senescence), Immune, Hematologic, Respiratory.

(4) Course Objectives and Outcomes*

Upon successful completion of this course, students will be able to meet these objectives:

- Describe in detail the functioning of the following systems: Neurologic (Including Autonomic and Special Senses), Muscular, Endocrine, Cardiac, Circulatory, Renal, Reproductive (including Pregnancy, Development, Growth and Senescence), Immune, Hematologic, Respiratory.
- Describe the integration of and interrelationships between these bodily systems.

- Clinically apply understanding of human physiology to factual scenarios, case problems, and/or pathologic conditions altering normal physiology.

The following EvCC Core Learning Outcomes are also introduced or assessed in this course:

- *Engage and take responsibility as active learners.* Students will acquire active learning skills by using multiple resources to answer application questions in lab, to complete clinical problems in teams, to complete worksheets and group term projects, and to learn material not taught through lecture.
- *Think critically.* Students will acquire analytical skills, problem-solving skills and the ability to distinguish physiologically rational claims from irrational claims through collaborative clinical problems, application questions in lab, individual research necessary for their visual projects and through interactive questioning in lecture.
- *Communicate effectively.* Students will write lab assignments, term projects and group problem assignments, and will make succinct oral presentations in class.
- *Demonstrate computer and technology proficiency.* Students will use data-logging sensors to send experimental data to computers for graphing and analysis.

(5) Required Books and Materials

- Textbook: *Human Anatomy & Physiology* (10th edition/2016) by Elaine N. Marieb & Katja Hoehn, published by Pearson.
- Access to student activities such as PhysioEx on the website MasteringAandP.com. An access code comes with the Everett CC bookstore bundle for this class, or you can purchase it separately from Pearson for ~\$70, or you can continue using your access code from Biology 231 if that still works. (If you need to enter a course ID, use MAPCROWTHER33075.)
- Consistent access to the course website: <https://everettcc.instructure.com/courses/1604263>. Check this site EVERY DAY in case there are new assignments, announcements, etc.
- Consistent access to a printer to print each lab (there is no lab manual for this course) and, if desired, each set of lecture slides.

(6) Other Requirements and Expectations

(6.1) Prerequisites

BIOL& 211 and 231, or BIOL& 221 and 222 and 223; and CHEM& 121, or CHEM& 161 and CHEM&162, all with a grade of C or higher; or instructor permission.

(6.2) Attendance and Participation

Consistent attendance and participation are critical for succeeding in this course!

- Most important of all is that you come to all labs and exams. In cases of unavoidable scheduling conflicts or personal emergencies, contact me as early as possible and explain the situation in as much detail as possible; I will try to work something out with you (e.g., you could attend the Tuesday lab instead of your usual Monday lab). Since physiology is fundamentally an

experimental science, students who miss more than two of the labs will not receive a passing grade for the course, irrespective of their other work. Please note that, unlike Biology 231, Biology 232 does NOT have “open lab” time outside of your official lab periods.

- Arriving late to exams: you will not be granted extra time unless you have an exceptionally good excuse.
- Arriving late to labs: this inconveniences both your lab partner (who has to start without you) and your instructor (who has to re-explain things once you arrive). You will be penalized unless you have an exceptionally good excuse.
- Attendance at all lectures: HIGHLY RECOMMENDED. Why not benefit from the presence of your classmates and instructor, rather than having to figure everything out on your own outside of class? Lectures will generally be recorded via Panopto, but recordings should be used as a supplement to (NOT a replacement for) participation in lectures. If you simply cannot get to a particular lecture, I appreciate being notified (in advance, when possible).

(6.3) Assignments and Assessments

One learns through regular practice. This course will give you MANY chances to practice working with the material. In general, there will be two assignments for each lecture and lab; one to ensure that you come prepared for the day’s work, and one to reinforce and extend what was covered that day. There will also be five lecture exams (including the final), online practice quizzes, and a lab project.

These different assignments will be graded in different ways.

- Most of the daily homework assignments will be graded for completeness and timeliness, i.e., if you did the assignment on time, you will get the points.
- The tests (mixtures of short-answer and multiple-choice questions) will be graded for correctness.
- Lab worksheets will be somewhere in between, i.e., points will be awarded both for completing the lab and for answering a few of the questions correctly.

<i>Assignment category</i>	<i># of assignments</i>	<i>Points per assignment</i>	<i>Total points in this category</i>
Pre-lecture homework	~25	2	50
Lecture worksheets	~25	2	50
Pre-lab homework	10	2	20
Lab worksheets	10	10	100
Lab project	1	50	50
Online practice quizzes	5	10	50
Tests	5	150	750
Approximate total			1070

(6.4) Final Grades

Final grades will be based on the percentage of total points earned, according to the chart below. No “curving” will be applied at the stage of awarding final grades.

0.00-59.49%: F	59.50-66.49%: D	66.50-69.49%: D+	69.50-72.49%: C-	72.50-76.49%: C	76.50-79.49%: C+
79.50-82.49%: B-	82.50-86.49%: B	86.50-89.49%: B+	89.50-92.49%: A-	92.50% and up: A	

(6.5) Late Work

In general, late work is accepted but penalized 20% per day. For example, a 10-point assignment would be penalized 2 points if submitted 0.1 to 24 hours late, 4 points if submitted 24.1 to 48 hours late, etc. If you have a spectacularly good excuse for being late, let me know as soon as possible and I’ll consider waiving the penalty.

(6.6) Academic Integrity – Cheating and Plagiarism

For exams, working with other students is NOT allowed (unless stated otherwise). For all other assignments, working together IS allowed (unless stated otherwise).

This class does not involve extensive library research or paper-writing. Nevertheless, if you use any sources other than your instructor, classmate, textbook, or lab handout, please cite them (I am not picky about format; a URL is generally fine). Examples:

- You quote the exact words used by another source, using quotation marks:
 - *According to Wikipedia, “People with extensive, bilateral hippocampal damage may experience anterograde amnesia—the inability to form and retain new memories.” (source: <http://en.wikipedia.org/wiki/Hippocampus>).*
- You gather information from another source and put it in your own words:
 - *Patients with severe lesions in their hippocampus cannot create new memories (source: <http://en.wikipedia.org/wiki/Hippocampus>).*

Accidental or intentional use of someone else’s work, ideas, research, or writing without attribution of the source may result in a failing grade on the assignment or a failing grade in the course, depending on the details of the situation. Any incidents of this type will be reported to the Dean of Student Development as a violation of the Student Conduct Code, which is described in the Student Rights and Responsibilities Handbook (everettcc.edu/files/students/student-activities/student-rights-responsibilities-and-policies.pdf).

(6.7) Other Tips for Success

- *Actively participate in everything.* Take notes in class. Ask questions. Answer questions, even if you have to guess. Don’t let your lab partner do all the fun stuff. Take charge of your education!

- *Practice metacognition.* Metacognition refers to cognition about cognition, i.e., thinking about how you think. For students, this encompasses “knowing how to learn, being able to monitor their own understanding, being reflective about what they understand and do not understand, and being able to strategize about how to resolve their confusions” (K.D. Tanner, *CBE Life Sciences Education* **11**: 113-120, 2012).
- *Get help when you’re starting to struggle, not after weeks of confusion.* Let’s solve small problems before they become big problems. Office hours and lab sessions are especially good times to check in with me.
- *Work together.* This can be done both online (via Canvas Discussion posts and Chats) and in person. Form study groups and help each other out! Just be sure that your submitted work reflects your own understanding and includes appropriate citations (see above).
- *Respect each other and me.* Respectful behavior includes: listening carefully when spoken to; giving others the space to think and to ask and answer questions; refraining from harsh or persistent criticism; avoiding language, attire, or movements that are likely to annoy or distract others; keeping conversations focused on course material; maintaining control over one’s emotions; and giving me adequate time to respond to requests.

(7) Approximate Class Schedule

Week (Dates)	Monday lecture	Tuesday lecture	Thursday lecture	LAB (Mon. or Tues.)
1 (Apr. 2-6)	Introduction	Ch. 1 (orientation)	Ch. 2 (chemistry)	Lab 1: Movement Across Membranes (Ch. 3)
2 (Apr. 9-13)	Ch. 3 (cells)	Ch. 4 (tissues)	Ch. 5 (integument)	Lab 2: Sensation, Reflexes, Reaction Times (Ch. 11-13)
3 (Apr. 16-20)	Ch. 11 (nervous system)	Ch. 12 (CNS)	Test 1 (Ch. 1-5)	Lab 3: Special Senses (Ch. 15)
4 (Apr. 23-27)	Ch. 13 (PNS/reflexes)	Ch. 14 (autonomic NS)	Ch. 15 (special senses)	Lab 4: Muscle Physiology (Ch. 9)
5 (Apr. 30 – May 4)	Ch. 9 (muscles)	Ch. 16 (endocrine system)	Test 2 (Ch. 11-15)	Lab 5: Blood (Ch. 17)
6 (May 7-11)	Ch. 17 (blood)	Ch. 18 (heart)	Ch. 19 (blood vessels)	Lab 6: The Heart, ECG, Blood Pressure (Ch. 18-19)
7 (May 14-18)	Ch. 20 (lymphatic system)	Ch. 21 (immune system)	Test 3 (Ch. 9, 16-19)	Lab 7: Respiration (Ch. 22)
8 (May 21-25)	Ch. 22 (respiratory system)	Ch. 23 (digestive system)	Ch. 24 (metabolism)	Lab 8: Digestive Enzymes (Ch. 23)
9 (May 28 – June 1)	No class (Memorial Day)	Ch. 25 (urinary system)	Test 4 (Ch. 20-24)	No lab
10 (June 4-8)	Ch. 26 (fluid/solute balance)	Ch. 27 (reproductive system)	Ch. 28 (pregnancy)	Lab 9: Urinalysis (Ch. 25)
11 (June 11-15)	Review for final	Test 5 (Ch. 25-28)	No lecture (finals week)	No lab (finals week)

(8) Support for Students: Equity and Accessibility*

Everett Community College through its Vision, Mission, and Strategic Plan, has made an institutional commitment to establish a diverse, equitable and inclusive working and learning environment. My goal is to create a classroom environment in which everyone can participate and learn. Because of the diversity of backgrounds, experiences, and beliefs all of us bring to this class, I expect you to interact with your peers in a spirit of generosity, mutual respect, and understanding.

If there are aspects of this course that prevent you from learning or that exclude you, please speak with me as soon as possible. Together we can develop strategies to meet both your needs and the requirements of this course. I am happy to talk privately after class or during my office hours.

You also have the right to request accommodation for a verified disability. For information and assistance, contact the Center for Disability Services (located in Parks 267, 425-388-9272, or cds@everettcc.edu) for help documenting specific needs you may have and determining appropriate accommodations.

We understand that for our campus to be welcoming and safe, it must be free from all forms of discrimination. Everett Community College does not discriminate based on, but not limited to, race, religion, creed, color, national origin, age, sex, sexual orientation, gender identity or expression, pregnancy or parental status, marital status, disability, genetic information, or status as a veteran of war. If you believe that you have been subjected to discrimination or harassment based upon any of these, you should let me know or contact the college's Title IX Coordinator at TitleIXCoordinator@everettcc.edu or 425-388-9271.

Additional student support information:

- *Canvas*. Assistance with the Canvas learning management system including logging in and course access. Whitehorse 210 – 425-388-9027 or 1-866-575-9027. Canvas Help Desks are also in the library, outside the Tutoring Center and the Whitehorse lobby.
- *Counseling and Student Success*. Assistance with career counseling, academic/educational counseling, advising, and referral to community mental health resources. Parks 3rd Floor – 425-388-9263.
- *Library*. Information and services to support research and learning including books, media materials, and databases. Librarians assist students in locating information and developing research skills. Parks 1st floor – 425-388-9353 (checkout) and 425-388-9354 (reference assistance).
- *Tutoring Center*. Free academic/tutorial support with course material, study skills, time management, and preparation for exams. Rainier 119 and Baker 112 – 425-388-9356.
- *Writing Center*. Peer writing assistants offer feedback, ideas, and methods for editing and polishing work. Gray Wolf 150 – 425-388-9406.
- *Additional Support Services*. Visit the Everett Community College Student Services website (everettcc.edu/students).

(9) General Information about EvCC Policies and Procedures*

As outlined in the campus civility statement (everettcc.edu/files/administration/policies/evcc1010-civility-statement.pdf), Everett Community College is committed to providing a safe learning and working environment. The expectation is that all students will conduct themselves in a civil, respectable and appropriate manner as a responsible member of the college community. The Student Rights and Responsibilities Handbook (everettcc.edu/files/students/student-activities/student-rights-responsibilities-and-policies.pdf) identifies and describes college expectations, students' rights, and outlines the process for resolving disciplinary matters, including Student Code of Conduct violations. The provisions of the Student Code of Conduct apply to all students whenever they are on the college campus, in college housing, or engaged in college-sponsored activities and functions.

(9.1) Emergency Preparedness and Campus Closures

In the event of an emergency situation adversely affecting college operations, public health, or the well-being and safety of students or employees, the college president may declare a temporary closure of any or all units of the institution. If the event of a closure, information will be posted on the opening screen of the EvCC website, emailed to students and employees at their college email address, and will also be available as a message on the college's main phone line at 425-388-9100. Students may sign up to receive an emergency alert as a text message or by personal email through the Rave system (getrave.com/login/everettcc). Faculty will communicate with students about adjustments in course content or requirements, including assignment deadlines that may be impacted by a closure.

(9.2) Academic Calendar

Registration and payment dates, application and refund deadlines, the final examination schedule, and all other information related to the academic year and each individual quarter is available on the college website (everettcc.edu/enrollment/registration/important-dates-calendar).