

## Syllabus: BIOL& 232 – Human Physiology – 15576/15577

### Course Information

- Term and year: Winter 2022
- Modality: in person (on campus)
- Meeting times and locations:
  - Lectures (section A-LEC/15576): Tuesday and Thursday, 10:00-11:50am, Shuksan 141 (I will arrive a bit early and can stay late)
  - Labs (section AL-LAB/15577): every other Wednesday, 10:00-11:50am, Shuksan 144 (I will arrive a bit early and can stay late)
  - Final exam: Tuesday, March 15, 10:00-11:50am, Shuksan 141
- Course credits: 5
- Prerequisites:
  - BIOL& 211 with a grade of C or higher
  - BIOL& 231 (or BIOL& 221 and 222 and 223) with a grade of C or higher
  - CHEM& 121 (or CHEM& 161 and CHEM&162) with a grade of C or higher
  - Anyone who has not yet met all prerequisites but wants to take this course should consult me as soon as possible (if you have not already done so).

### Instructor Information

- Instructor name: Gregory J. Crowther, Ph.D. (“Crowther” rhymes with “NOW, sir!”)
  - Please call me “Professor Crowther” or “Doctor Crowther” or “Doctor C”
  - My pronouns: he/him/his
- Contact information:
  - Email: [gcrowther@everettcc.edu](mailto:gcrowther@everettcc.edu) (Canvas messages work too)
    - Expect responses from me within 24 hours.
  - [My faculty website](#)
  - Office: Shuksan 118 (office phone 425-388-9480)
- Office hours
  - Monday through Thursday, 9:00-9:45am, Shuksan 118
  - The night before each test, 8:00-9:00pm, in Zoom ([meeting ID 536 606 5089](#))
  - Additional times by appointment
    - in person (Shuksan 118) OR in Zoom ([meeting ID 536 606 5089](#))
    - send me a quick message indicating availability and topic(s)

## Course Description\*

Detailed study of the functioning, integration and interrelationships of the following organ systems of the human body: Integumentary, Skeletal, Muscular, Neurologic (including Autonomic and Special Senses), Endocrine, Hematologic, Cardiovascular, Lymphatic/Immune, Respiratory, Digestive, Urinary, and Reproductive (including Development). Lectures and laboratory exercises emphasize both cellular and systems-level functions. For allied health professional majors.

## Course Learning Objectives and Outcomes\*

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

- Explain in detail the functioning of the following organ systems: Integumentary, Skeletal, Muscular, Neurologic (including Autonomic and Special Senses), Endocrine, Hematologic, Cardiovascular, Immune, Respiratory, Digestive, Urinary, and Reproductive (including Development).
- Describe the integration of and interrelationships between these bodily systems for topics such as homeostasis and acid-base balance.
- Clinically apply understanding of human physiology to factual scenarios, case problems, and/or pathologic conditions altering normal physiology.
- Use evidence-based learning techniques and technologies to explore core concepts in the biological sciences.

The following Program Learning Outcomes are assessed in this course:

- Apply quantitative analysis to solve problems.
- Apply the scientific method.
- Effectively communicate scientific processes.
- Discuss important biological concepts.

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

- Analytical Thinking
- Effective Communication

## Required Resources

- *A personal schedule that includes at least 20 hours per week set aside for this course.* Some students report spending much more time than that. Please do not take this course unless it fits into your current life!
- *Regular, reliable access to a computer (something better than a phone).* If possible, pre-arrange for a backup option in case your usual device is unavailable at some point.
- *Regular, reliable Internet access.* If possible, pre-arrange for a backup option in case your usual Internet access is unavailable at some point.
- *Regular, reliable transportation to and from campus.* If possible, pre-arrange for a backup option in case your usual transportation is unavailable at some point.
- An account associated with course ID **crowther58238** at [Pearson My Lab And Mastering](#).

- You may purchase an access code via the EvCC bookstore, or you may buy access directly from Pearson My Lab And Mastering (prices were \$70-120 the last time I checked). If you are not yet sure that you will be taking this course with me, or if you are experiencing temporary financial issues, you can register for free temporary (14-day) access. Your access must include the following:
  - the e-Text, i.e., the electronic version of our textbook: *Human Anatomy & Physiology* (11<sup>th</sup> edition/2019) by Elaine N. Marieb & Katja Hoehn, published by Pearson (ISBN 13: 978-0-13-458099-9; ISBN 10: 0-13-458099-0)
  - a textbook-specific Study Area, including subsections like the following:
    - Study Area → Practice Tests & Quizzes
    - Study Area → PhysioEx
  - Learning Catalytics (for “clicker” questions)
    - Course Home → Learning Catalytics
- [Course website in Canvas](#)
  - **Canvas is your “home base” for the course.** All assignments will be listed in Canvas, and you will turn in everything in Canvas except for Learning Catalytics answers (which you will submit via Pearson My Lab and Mastering) and in-person tests.
  - Please check Canvas every day and/or adjust your Canvas settings (Account → Notifications) so that you are notified of all new announcements, assignments, etc.
- There is no lab manual. Weekly lab handouts will be posted to Canvas (see link above).
- OPTIONAL: A physical copy of our textbook (listed above). Your access to Pearson My Lab And Mastering, which includes the e-Text, will let you purchase a loose-leaf hole-punched version of the textbook for an additional \$44.99. Getting a hard copy of the textbook (either this way or some other way) allows you to use it when offline, underline things, write notes in the margin, etc.

### Access to Technology\*

The Library Media Center loans Chromebooks, netbooks, wifi hotspots, and calculators to currently enrolled students. Contact the Circulation desk for availability and check-out procedures: [circulation@everettcc.edu](mailto:circulation@everettcc.edu). See the [Technology Resources](#) page for how to access free versions of Microsoft Office 365 and for discounts on other hardware and software.

### Attendance and Participation

Consistent attendance and participation are critical for success! However, you should stay home when ill (or when a family member has COVID, etc.). How can we balance these two priorities?

- The grading system (described below) is somewhat flexible to make sure that missing 1-2 labs, lectures, or tests will not ruin your grade.
- For unusual long-lasting individual circumstances beyond your control (e.g., your kid is quarantined at home for 10 days), contact me and we will work something out.
- Aside from personal or family illnesses or emergencies, you should plan to come on time to all lectures, labs, and exams. I will do my best to make the in-person sessions useful and

interesting. Even students who faithfully watch the video lectures at home benefit greatly from the additional practice and reinforcement provided by on-campus activities.

- Aside from the usual lecture and lab sessions, I urge you to take advantage of opportunities to interact with me and/or your classmates via office hours, Canvas discussions, study groups, etc.

### Lab Safety Guidelines

- Wear closed-toed shoes and clothes that cover your legs.
- Reassemble models and return them to their proper cupboards. If you break a model, please save the pieces so they can be repaired or submitted for an insurance claim.
- Clean all equipment with dish soap and Lysol, dry it, and put it away properly.
- Use Lysol disinfectant to wipe table tops and chairs each time you are done in the lab.
- Place all wastes in the appropriate containers (regular trash, non-biohazardous sharps, biohazardous non-sharps, and biohazardous sharps).
- Avoid plugging the sink drains with wastes such as animal parts.
- We provide gloves. A lab coat is optional.
- Safety goggles are required during dissections.
- Know the locations of the eyewash stations, first aid kits, and exits.
- If you have questions about safety, waste disposal, etc. for any particular session, just ask.
- Children are not allowed in the labs. Students are not allowed in the stockroom.
- No smoking, eating, or drinking in lab at any time.

### Other Tips for Success in This Course

- *Actively participate in everything.* Take notes on video lectures. Ask questions. Answer questions, even if you have to guess. 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” (Kimberly D. Tanner, *CBE Life Sciences Education* **11**: 113-120, 2012).
- *Aim for a growth mindset and an internal locus of control.* People with a growth mindset believe that they can get better at anything via careful, well-targeted practice, whereas people with a fixed mindset believe that success depends most on people’s degree of innate talent. People with an internal locus of control believe that they can control their educational outcomes, whereas people with an external locus of control believe that the outcomes are largely beyond their control (Dhiraj Nallapothula et al., *Journal of Microbiology and Biology Education* **21**: 1-12 2020).
- *Work together.* This can be done online in various ways: Canvas Discussions and Chats, Zoom sessions, etc. Form study groups and help each other out! Just be sure that your submitted work reflects your own understanding and credits any outside sources.
- *Respect me and your peers, and expect respect in return.* Respectful behavior includes: listening carefully when spoken to; giving people the time and space to think and to ask and answer

questions; refraining from harsh or persistent criticism; avoiding language, attire, or movements likely to be annoying or distracting; keeping conversations reasonably focused on course material; and maintaining reasonable control over one's emotions.

- *Get help when you're starting to struggle, not after weeks of problems.* Let's address small problems (concerning the material itself, study habits, interactions with classmates, or whatever) before they become big problems. Office hours and labs are especially good times to check in with me.

## Assignments

We learn through regular, focused, thoughtful practice. This course will give you many opportunities to practice working with and processing the material. There will be a brief assignment due before each lecture and each lab to help keep you moving along through the material. There will also be numerous in-class and in-lab assignments, plus several tests. These different assignments will be graded in different ways:

- Short daily assignments will be graded for completeness (did you do the whole thing?) and timeliness (did you turn it in on time?).
- Tests will be graded for quality (were your answers good?). Tests will include 12 to 15 short-answer questions and 15 to 23 multiple-choice questions. Short-answer questions will emphasize scientific reasoning (as opposed to straight memorization) and will be based on [Test Question Templates](#) (TQTs).
- Lab worksheets will be graded for completeness, timeliness, and quality. In general, only a few answers will be checked for quality.

<i>Assignment category</i>	<i>Approximate # of assignments</i>	<i>Points per assignment</i>	<i>Total points in this category</i>
Pre-lecture homework	23 (none dropped)	2 points	46 points
Pre-lab homework	4 (none dropped)	2 points	8 points
Discussion board	7 (none dropped)	2 points	14 points
Lab check-ins	4 (none dropped)	5 points	20 points
Lab worksheets	9 (lowest 1 dropped)	10 points	80 points
Tests	6 (lowest 1 dropped)	150 points	750 points
<b>Approximate total</b>			<b>918 points</b>

There will also be one or two small extra-credit opportunities.

Notice that, despite the large number of assignments, most of the points are earned on the tests. Thus, if your goal is to achieve a certain grade, you should aim to score near that level on (most of) the tests.

## Grading Scale

Final letter grades (and corresponding numbers on the 4-point scale) are based on the percentage of total points earned, according to the chart below. No “curving” is applied at the stage of awarding final grades.


92.50% to 100% = <b>A (4.0)</b>	72.50% to 76.49% = <b>C (2.0)</b>
89.50% to 92.49% = <b>A-minus (3.7)</b>	69.50% to 72.49% = <b>C-minus (1.7)</b>
86.50% to 89.49% = <b>B-plus (3.3)</b>	66.50% to 69.49% = <b>D-plus (1.3)</b>
82.50% to 86.49% = <b>B (3.0)</b>	59.50% to 66.49% = <b>D (1.0)</b>
79.50% to 82.49% = <b>B-minus (2.7)</b>	0% to 59.49% = <b>F (0.0)</b>
76.50% to 79.49% = <b>C-plus (2.3)</b>	

## Late Work




Deadlines help keep you moving through this fast-paced course! To help you stay on track, I do enforce assignment deadlines. Late assignments are accepted for half credit (e.g., 2 points for a 4-point assignment) up until the test to which that assignment applies, after which time no credit is available. (Thus, no credit will be given for work submitted after the final exam.) My exceptions to this policy are:

- Assignments due during the first week of class – i.e., while you are learning how to turn in which assignments – will be accepted late without penalty.
- Late penalties will also be waived if you have a valid excuse that you post as a comment on the assignment as listed in Canvas (example shown below). Reasonable excuses include personal and family illnesses and emergencies, but not mere forgetfulness or oversleeping. In general, you do not need to disclose sensitive personal details, but I reserve the right to request documentation of exceptional circumstances.

Comments for this Attempt

 0

I'm sorry this is late, Dr. C -- I had to take my mom to the hospital yesterday and stay with her overnight.

   Submit

An assignment you have not turned in may be given a score of 0 shortly after the due date. *This should not discourage you from submitting the assignment late for partial credit (or full credit with a valid excuse), but should serve as a reminder that you will get a 0 unless you turn something in.*

Tests may not be taken late; however, each student may take one optional oral makeup test AND drops their lowest test score. This means, for example, that if a student misses two of six tests, they can orally make up one of the missing tests and drop the other one, and thus can still earn a good final grade.

## Academic Integrity\*

As part of an academic community, EvCC students are expected to adhere to academic honesty and avoid occurrences of plagiarism. 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. This decision will be dependent on the nature and extent of the use. 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](#). The [Writing Center's Avoiding Plagiarism](#) guide includes resources for understanding what plagiarism is and how to avoid it.

## Class Schedule

Week # (Dates)	Tuesday Lecture	Wednesday Lab	Thursday Lecture
1 (Jan. 3-7)	Ch. 1 (introduction), Ch. 2 (chemistry)	<b>No required in-person lab</b>	Ch. 2 (chemistry), Ch. 3 (cells)
2 (Jan. 10-14)	Ch. 4 (tissues), Ch. 5 (integument)	Lab 3: senses/reflexes	Ch. 5 (integument), Ch. 11 (nervous)
3 (Jan. 17-21)	<b>Test 1 (Ch. 1-4)</b>		Ch. 12 (CNS), Ch. 13 (PNS/reflexes)
4 (Jan. 24-28)	Ch. 13 (PNS/reflexes), Ch. 14 (autonomic NS)	Lab 4: muscles	Ch. 15 (special senses), Ch. 9 (muscles)
5 (Jan. 31-Feb. 4)	Ch. 9 (muscles), Ch. 16 (endocrine)		<b>Test 2 (Ch. 5, 11-13)</b>
6 (Feb. 7-11)	Ch. 17 (blood), Ch. 18 (heart)	Lab 6: blood/ cardiovascular	Ch. 18 (heart), Ch. 19 (vessels)
7 (Feb. 14-18)	<b>Test 3 (Ch. 9, 14-15)</b>		Ch. 21 (immunity), Ch. 22 (respiration)
8 (Feb. 21-25)	Ch. 22 (respiration), Ch. 25 (urinary)	Lab 8: urinary	Ch. 26 (ECF homeostasis), Ch. 23 (digestion)
9 (Feb. 28-Mar. 4)	<b>Test 4 (Ch. 16-19)</b>		Ch. 23 (digestion), Ch. 24 (metabolism)
10 (Mar. 7-11)	Ch. 27 (reproduction), Ch. 28 (pregnancy)	<b>No required in-person lab</b>	<b>Test 5 (Ch. 21-22, 25-26)</b>
11 (Mar. 14-18)	<b>Test 6 (Ch. 23-24, 27-28)</b>	<b>No lab (finals week)</b>	<b>No class (finals week)</b>

Please note the following general information about the above schedule:

- I reserve the right to make adjustments for unexpected events such as natural disasters.
- We will cover about 1.5 textbook chapters per lecture session.

- We will cover textbook chapters in the following order: 1-5, 11-15, 9, 16-19, 21-22, 25-26, 23-24, 27-28. (We will skip chapters 6-8, 10, 20, and 29.)
- Labs will include both on-campus labs (2, 4, 6, 8) and additional exercises to be completed at home (not listed above: 1, 3, 5, 7, 9).

### Important Dates\*

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](#).

### Flexibility Statement\*

I have attempted to make this syllabus as comprehensive and accurate as possible and I may occasionally need to make small adjustments during the quarter. I will announce any changes in class or notify you in writing and in Canvas.

## Support for Students\*

Students are encouraged to read the [Student Rights and Responsibilities Handbook](#) to be aware of their full scope of rights. Here are a few policies and student support services that are useful for you to know.

### Academic Grievance Procedure\*

If a student has evidence that they have been: Unfairly treated in matters related to grading, course policies or expectations; falsely accused of cheating; or inappropriately penalized for alleged cheating; they may be said to have an academic grievance. Students can approach any member of the campus community whom they trust for guidance on following the formal and informal [academic grievance procedures](#).

### Accessibility\*

In accordance with the [Americans with Disabilities Act Policy](#), EvCC is committed to ensuring that classes are accessible to all students, including those with visible and invisible disabilities. If at any point a student is not able to access the space, content, or experience of a course they should contact the [Center for Disability Services](#) (425-388-9272, or [cgs@everettcc.edu](mailto:cds@everettcc.edu)).

### Basic Needs\*

It can be challenging to do your best in class if you have trouble meeting basic needs like safe shelter, sleep, or nutrition. [EvCC's food pantry](#) is available by appointment. [Student Emergency Assistance Grants](#) are also available for unexpected emergencies.



### Civility\*

As outlined in the [campus civility statement](#), 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](#) 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.

### Faith and Conscience Leave\*

Everett Community College students are entitled to [two days of excused absences](#) per academic year (summer quarter through the end of spring quarter) for reasons of faith or conscience or for organized activities conducted under the auspices of a religious denomination, church, or religious organization. Such absences must be requested in writing within the first two weeks of the class or the first week for a late start class and may not incur additional fees for students.

### Non-Discrimination Statement\*

Everett Community College does not discriminate based on, but not limited to, race, color, national origin, citizenship, ethnicity, language, culture, age, sex, gender identity or expression, sexual orientation, pregnancy or parental status, marital status, actual or perceived disability, use of service animal, economic status, military or veteran status, spirituality or religion, or genetic information in its programs, activities, or employment. The Title IX Coordinator has been designated to handle inquiries regarding nondiscrimination policies and can be reached at 2000 Tower Street, Everett, WA 98201, [TitleIXCoordinator@everettcc.edu](mailto:TitleIXCoordinator@everettcc.edu), or 425-388-9271. For more information on reporting and procedures, see [EvCC's Discrimination and Harassment Policy](#).

### Title IX Policy and Procedure\*

As outlined in EvCC's [Title IX Policy](#), the college recognizes its responsibility to investigate, resolve, implement corrective measures, and monitor the educational environment and workplace to stop, remediate, and prevent discrimination on the basis of sex, as required by Title IX of the Educational Amendments of 1972, Title VII of the Civil Rights Act of 1964, the Violence Against Women Reauthorization Act, and Washington State's Law Against Discrimination, and their implementing regulations. As outlined in the [Title IX Procedure](#), any employee, student, applicant, or visitor who believes that they have been the subject of Sexual Harassment should report the incident or incidents to Everett Community College's Title IX Coordinator: [titleixcoordinator@everettcc.edu](mailto:titleixcoordinator@everettcc.edu) or 425-388-9271.