

Syllabus: BIOL& 231 Human Anatomy – 26045/26046

[unofficial; the official version is in SimpleSyllabus format]

Course Information

- Term and year: Spring 2025
- Modality: in person (on campus)
- Meeting times and locations:
 - Labs: Mondays and Wednesdays, 12:20-2:10pm, Shuksan 140
 - Lectures: Tuesdays and Thursdays, 12:20-2:10pm, Shuksan 145
 - Optional open-lab time: Monday through Friday, about 7:30am to 3pm whenever no class is using Shuksan 140; weekend times to be arranged and announced
- Course credits: 5
- Prerequisites:
 - BIOL& 211 (or BIOL& 221 and BIOL& 222) with a grade of C or higher
 - CHEM& 121 (or CHEM& 161 and CHEM& 162) with a grade of C or higher
 - Willingness to dissect animal specimens, including cats
 - If you have not yet met all prerequisites, but you believe that this course may be right for you, please consult me as soon as possible (if you have not already done so).
 - The following courses are NOT prerequisites, but may be helpful: HLTH 100 (Medical Terminology) and/or HLTH 102 (Applied A & P).

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 (Canvas messages work too)
 - You can expect a response from me within 24 hours.
 - [My faculty website](#)
 - Office: Shuksan 118 (office phone 425-388-9480)
- Office hours
 - Mondays, Tuesdays, Wednesdays, and Thursdays, 2:15-2:35pm, Shuksan 118
 - The evening before each test (not including makeups/retakes), 8:00-0:00pm, 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*

[*Asterisks indicate information and language that are standardized for Everett Community College and/or this course; they are not specific to this instructor or this quarter.]

Detailed examination of the human body, organized by organ system (Integumentary, Skeletal, Muscular, Nervous, Cardiovascular, Lymphatic/Immune, Respiratory, Digestive, Urinary, and Reproductive (including Development)). Primary emphasis on gross anatomy supported by animal dissections (including repeated use of preserved cats) and 3D models, with additional emphasis on cell- and tissue-level anatomy supported by microscope slides and histology images. For allied health professional majors.

Course Learning Objectives and Outcomes*

- Upon successful completion of this course, students will be able to:
 - Describe in detail the gross and microscopic structures of the following human organ systems: Integumentary; Skeletal; Muscular; Central, Peripheral and Autonomic Nervous; Cardiovascular; Lymphatic/Immune; Respiratory; Digestive; Urinary; and Reproductive (including Development).
 - Carry out detailed dissections of animal specimens.
 - Use a microscope to observe cells and tissues.
 - Apply knowledge of anatomy to clinical contexts.
 - Use evidence-based learning techniques and technologies to explore core concepts in the biological sciences.
- The following Program Learning Outcomes (PLOs) are assessed in this course:
 - PLO 1: Apply quantitative analysis to solve problems.
 - PLO 2: Apply the scientific method.
 - PLO 3: Effectively communicate scientific processes.
- The following EvCC Core Learning Outcomes (CLOs) are assessed in this course:
 - CLO 1: Analytical Thinking
 - CLO 2: 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) and the Internet.* 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.
- *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.
- *Electronic textbook: Marieb Human Anatomy & Physiology, 12th edition, by Hoehn, Haynes, and Abbott.* You will access this e-text by setting up an account associated with course ID **crowther 28665** at [Pearson My Lab And Mastering](#). You should NOT obtain this through the EvCC

bookstore; instead you should buy access directly from Pearson My Lab And Mastering. There are some different pricing options:

- If you already paid for 24 months of textbook access (during Fall 2024 or Winter 2025), you should not need to pay again, although some students have reported problems with this. Make sure to use the same username and password as before, and consult Pearson technical support if you run into trouble.
- If you have not previously paid for 24 months of textbook access...
 - 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 14-day access.
 - If you do not anticipate needing the e-text any more after this quarter, then you can buy 18 weeks of access (for about \$89.99).
 - There is also the option of buying 24 months of access (for about \$149.99), since Biology 231 and Biology 232 now use the same textbook (Hoehn et al.). Unfortunately, students have reported problems with transferring their 24 months from one course/instructor to another. Therefore, the safer option is to buy the 18 weeks of access.
- *Lab manual alternative: Visible Body website.* Instead of a traditional lab manual we will supplement our in-person labs with a fantastic 3D-simulation website called Visible Body. To get started, [follow this link to the Courseware course invitation](#).
 - Access to the website normally costs \$49.99 for one year of access.
 - You can get a 20% discount with the following coupon code, valid until May 1st: EVERETTCC-SPR25 (note that this is not an activation code, which is different).
 - As with Pearson Mastering, there is a two-week free trial option if you are not yet sure that you will be staying in the course, if you are waiting for financial aid to come through, etc.
- *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.

Optional Resources and Access to Technology

- A physical copy of our textbook (listed above).
 - Your access to PearsonMyLabAndMastering.com, which includes the e-text, will let you purchase a loose-leaf hole-punched version of the textbook for an additional \$45-50. You might want to get a hard copy of the textbook (either this way or some other way) so that you can consult it independently of the Internet, underline things, write notes in the margin, etc. A previous edition (11th or 10th) is OK for this purpose.
- Lab manual: *Human Anatomy Laboratory Manual with Cat Dissections* (9th edition/2020) by Marieb & Smith; published by Pearson (ISBN 13: 978-0-13-516803-5; ISBN 10: 0-13-516803-1)

- This lab manual is required for most sections of this course but is optional in my section. You will not need the manual to complete your lab assignments.
- Visible Body phone app
 - For another \$25-35, you can have Visible Body on your phone, too!
- Access to a human skeleton model (any kind with realistically shaped bones)
 - This may come in handy for at-home hands-on learning of bones, muscles, and joints. For example, you can use modeling clay or play-dough to show the locations of muscles. I've bought a "half-size" model (33.5 inches tall) for about \$50; you can do likewise, or you can borrow a model owned by your friend/workplace/etc.
- See the EvCC [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 also deal with emergencies and illnesses appropriately. How can we balance these competing priorities?

- The grading system (described below) is somewhat flexible to make sure that missing 1-2 labs or tests will not ruin your grade.
- For unusual long-lasting individual circumstances beyond your control (e.g., you or your kid is sick at home for 10 days), contact me to discuss your options, which may include [taking a temporary grade of Incomplete](#) and making up missing work after the quarter ends. (Once all work is turned in, your Incomplete is replaced with whatever your grade turned out to be.)
- Aside from personal or family illnesses or emergencies, please come on time to all lectures, labs, and exams.
- Aside from the usual lecture and lab sessions, please take advantage of opportunities to interact with me and/or your classmates via office hours, Canvas discussions, study groups, etc.

Lab Safety Summary

- Wear closed-toed shoes and clothes that cover your legs. Make sure long hair is under control.
- 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.
- 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.
- No eating, or drinking in lab at any time. Please leave drinks and water bottles outside.
- For additional information, consult the [full EvCC biology lab safety guide](#).

Other Tips for Success in This Course

- *Come to lectures!* While it is theoretically possible to skip a bunch of lectures and do fine, that approach wouldn't work for most students. Please take advantage of the chances to practice the material in person with your cool classmates!
- *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**: [1987](#), 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 an 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 activities, plus several tests. These different assignments will be graded in different ways:

- Pre-lecture and pre-lab assignments will be graded only 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 (6 points each), 12 to 24 multiple-choice questions (2 points each), and 30 to

40 structure-ID questions (1 point each). Short-answer questions will emphasize scientific reasoning and problem-solving (as opposed to straight memorization) and will be based directly on [Test Question Templates](#) (TQTs). All structure-ID questions will be based directly on structure lists included in each lab as a list of bold-faced terms.

- Post-lab submissions 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 number of assignments</i>	<i>Approximate points per assignment</i>	<i>Approximate points in this category</i>
Pre-lecture homework (VLQs)	27	2 points	54 points
Discussion boards	5	2 points	10 points
Pre-lab homework	20	2 points	40 points
Lab check-ins	20	4 points	80 points
Lab worksheets	20 (lowest 1 dropped)	5-10 points	120 points
Tests	6	150 points	900 points
Approximate total			1204 points

There may also be a small extra-credit opportunity.

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 the tests. As the quarter progresses, do not worry too much about Canvas's calculation of your grade so far; instead, trust that if you are turning in assignments on time and scoring near your goal grade for most tests, your final grade should end up about what you want it to be.

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. For maximum transparency and fairness, no "curving" is applied at the stage of awarding final grades.


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

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., 2.5 points for a 5-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 when – will be accepted late without penalty.
- Lab check-ins can be done late without penalty – though I strongly recommend doing them prior to the corresponding tests.
- Late penalties will also be waived if you have a reasonable excuse* that you post as a Canvas comment on each specific assignment that is late (not as a Canvas message – see example below). If you have an excuse that applies to multiple assignments, please add a comment on each affected assignment. *Posting excuses as Canvas comments on the affected assignments ensures that I see the excuse when I am grading the assignment.*
 - *Reasonable excuses include family illnesses, day-care closures, temporary work conflicts, close-friend crises, etc. You do NOT need to disclose sensitive personal details (though I reserve the right to request documentation of exceptional circumstances that last for weeks).

Comments for this Attempt

 0

Submitted late because of a family medical situation yesterday.

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 up to three optional makeups/retakes (on the specific dates shown below), whether or not they missed the first offering of the test. Each makeup/retake will be similar to the original test in content coverage and difficulty, but the specific questions will be different from those of the original test.

Academic Integrity*

As part of an academic community, EvCC students are expected to submit only their own work and avoid occurrences of plagiarism. This includes submitting answers that are not your own on quizzes and exams. The [Writing Center's Avoiding Plagiarism Guide](#) includes resources for understanding what plagiarism is and how to avoid it.

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](#).

Use of Generative AI*

Generative AI, such as Chat GPT, Dall-e, Bard, Playground, etc., may be used as tools to generate ideas and organize thoughts but it should not be used to replace student work for this class. AI is often biased, inaccurate, and is not reflective of you as a learner. You are responsible for analyzing and fact-checking AI-generated results before using them in your work. If AI is used in your work it should be used minimally and cited. Using AI as a replacement for your work, for the majority of your work, and/or not citing the use of AI will be treated as a violation of the Student Conduct Code and reported to the Dean of Student Development (see above).

Class Schedule

Please note the following general information about the schedule:

- The schedule refers both to chapters ("Ch.") in your textbook (Hoehn et al.) and associated lab exercises whose details will be available in Canvas.
- I reserve the right to make adjustments for unexpected events such as natural disasters.

Week # (Dates)	Mon. Lab	Tues. Lecture	Wed. Lab	Thurs. Lecture
1 (April 7-11)	Ch. 1 (intro), Ch. 1 lab	Ch. 3 (cells), Ch. 4 (tissues)	Ch. 4-5 labs	Ch. 5 (integument), Ch. 6 (bones)
2 (April 14-18)	Ch. 5-6 labs (on your own; Dr. C away)	No lecture (Dr. C away)	Ch. 7 lab A	Ch. 7 (skeleton), Ch. 8 (joints)
3 (April 21-25)	Ch. 7 lab B	Test 1 (Ch. 1, 3-5)	Ch. 8-9 labs	Ch. 9-10 (muscles)
4 (April 28-May 2)	Ch. 10 lab A	Ch. 11 (nervous tissue), Ch. 12 (CNS)	Ch. 10 lab B	Test 2 (Ch. 6-8)
5 (May 5-9)	Ch. 11 lab	Ch. 13 (PNS), Ch. 14 (autonomic NS)	Ch. 12 lab	Optional Test 1/2 makeup/retake
6 (May 12-16)	Ch. 13/15 labs	Ch. 15 (special senses), Ch. 16 (endocrine)	Test 3 (Ch. 9-11)	Ch. 17 (blood), Ch. 18 (heart)
7 (May 19-23)	Ch. 16 lab	Ch. 19 (vessels), Ch. 20 (lymphatic), Ch. 22 (respiratory)	Ch. 18 lab	Test 4 (Ch. 12-15)
8 (May 26-30)	No lab (Memorial Day)	Ch. 23 (digestive), Ch. 25 (urinary)	Ch. 19 lab	Optional Test 3/4 makeup/retake
9 (June 2-6)	Ch. 22-23 labs	Ch. 27-28 (reproduction)	Ch. 25 lab	Test 5 (Ch. 16-20)
10 (June 9-13)	Ch. 27-28 lab	<i>Catch-up/review day</i>	Test 6 (Ch. 22- 23, 25, 27-28)	<i>Return Test 6</i>
11 (June 16-20)	Optional Test 5/6 makeup/retake	No lecture (finals week)	No lab (finals week)	No lecture (finals week)

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 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 for walk-ins and 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.

Counseling*

Everett Community College Counseling & Student Success (CSS) offers appointments for currently enrolled students with professional counselors for Academic/Educational Counseling, Career Counseling, and free short-term Personal Counseling, as well as referral to community resources to help students adjust to, cope with, and succeed in college. To make an appointment, visit Parks Student Union, 3rd Floor, call 425-388-9263, or email counseling@everettcc.edu.

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.

Help with Technology*

For help with Canvas, Panopto, or Zoom, contact eLearning at elearning@everettcc.edu or visit the [eLearning website](#). For help with logins, passwords, and email, contact IT at helpdesk@everettcc.edu or visit the [IT help desk website](#).

Non-Discrimination Statement*

Everett Community College offers equal opportunity in education and employment. For more information, visit the [Equal Opportunity and Title IX website](#): EverettCC.edu/EqualOpportunity

Pathways Coaches*

Pathways coaches are available to help you navigate your college experience, including helping you navigate academic resources and services and build out a success plan. They are available to meet in person or over Zoom. See the [EvCC Pathways Coaches page](#) for contact information for your Pathways coach.

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 or 425-388-9271.