POINT 1902 LOMA NAZARENE UNIVERSITY	Biology 1040: Human Anatomy and Physiology II section 2 3 units Bio 1040L: Human Anatomy and Physiology II lab Lab sections 2a & 2b & 2c 1 unit
Spring 2025	

Lecture time & location: Latter Hall 01 MWF 1:30 – 2:25 pm	**Instructor title and name:** Dr. Yoojin Choi
Laboratory time & location: Sator 117 section 3A: Thu 7:45 – 10:45 am section 3B: Thu 11 am – 2 pm section 3C: Thu 2:30 – 5:30 pm	**Phone:** (619) 849-2654
Final Exam: Wed May 7 1:30 – 3:30 pm	**Email:** ychoi@pointloma.edu
Office location: Rohr Science 116 (Enter through Biology Office Suite) **Office hours:** MWF 10:30 – 11:30am (Choi's Weekly Schedule is posted by the door.) These "office hours" or drop-in hours are the times I am committing to sit in my office and wait for you to drop in, but you're welcome to come in and chat if my door is open at any other time. If you prefer a designated meeting time, email me to set up an in-person meeting or a Zoom meeting. I work from home on Tuesdays, so if that's your preferred day, please email for a Zoom meeting. I want to be available to meet with you and help you succeed!	

PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Course Description: Bio 1040

The second semester of a sequence which examines the human body from an integrated perspective emphasizing the interrelationship of structure and function. Topics include sensory and autonomic nervous system, endocrine system and reproduction, cardiovascular, immune, respiratory, digestive, and urinary systems. 3 units

Co-requisite: Bio 1040L

This A&P laboratory is a Bio 1040 co-requisite. Students enrolled in Bio 1040 must be enrolled in Bio 1040L, and vice versa. If Bio 1040 is dropped, Bio 1040L must also be dropped. Offered every year. Letter graded. Your grade for Bio 1040 and Bio 1040L will be calculated together and the same grade applied to both. 1 unit

Pre-requisites: Bio 1030 and Che 1003 or Che 1052

A passing grade in Bio 1030 and Che 1003 or Che 1052 (or their equivalent) is a prerequisite for this course. If you failed either one of these, you are not eligible to enroll in Bio 1040. This course is the second of a two-semester sequence where the structure and function of various systems of the body are studied in an integrated fashion. If you did not take Biology 1030 at PLNU, you should see me to be sure that your background is appropriate for this course.

Course Learning Outcomes

1. You will be able to identify the anatomy of, and blood flow through, the mammalian heart.
2. You will be able to identify major blood vessels of the human and the cat, and the regions supplied by these blood vessels.
3. You will understand the basic anatomy and physiology of the sensory and autonomic nervous systems, endocrine system, cardiovascular system, immune system, respiratory system, digestive system, and urinary system.
4. You will be able to describe the symptoms and mechanisms of representative diseases and injuries, and explain how such pathophysiology relates to normal anatomy and physiology.

* See Appendix 2 for alignment with program learning outcomes of PLNU TUG programs that require Bio 1030 & 1040.

Required Texts and Materials

For each lecture there is an assigned reading. It is recommended that you read through these pages both prior to and following the related lecture. The textbook will be used both semesters of the Human Anatomy and Physiology sequence (Bio 1030 & Bio 1040); the dissection kit is also used both semesters.

- Betts, DeSaix and Johnson, *Anatomy and Physiology* (2nd ed.), OpenStax, 2022. ISBN-13: 978-1711494067 available as a free e-text or PDF at https://openstax.org/details/books/anatomy-and-physiology-2e

You should download the free PDF on your devices now. Do not count on online access during class.
You can buy a hardcopy online or at the bookstore. Many students prefer the hardcopy, particularly in lab.

The following materials are required for various laboratory activities:

- Dissecting kit (available at bookstore)
- Safety glasses (also used in chemistry classes)
- Old shirt or lab coat for dissecting work

All course materials are posted on Canvas, and grades are kept on Canvas. Check Canvas and PLNU email daily.

Recommended Materials

These two items are for sale at the bookstore and may be helpful for learning the anatomical material.

- Krieger, A Visual Analogy Guide to Human Anatomy & Physiology
- Hansen, *Netter's Anatomy Coloring Book*

Spiritual Care

PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith. "Office Hours" are drop-in time for students to have conversations about all topics, not just academics.
If you have questions, a desire to meet with the chaplain or have prayer requests you can also contact the Office of Spiritual Life and Formation.

Dr. Choi's Teaching and Learning Philosophy

You are the main player in your learning, not a spectator of my teaching. The responsibility to learn is yours. For learning to happen, you must take an active role in the process. However, you are not alone in the process: I am here to work with you. Extending the sports analogy, I'm your coach and your classmates are teammates, and we learn together in community.

You are expected to come to class prepared, which requires you to read, study, and learn *before* class. Of course, you're expected to keep reading, studying, and practicing after class, too. There will be a lot of interactive learning in both lecture and lab. I expect you to pull your weight and collaborate actively. Let us all help in each other's learning.

Learning Opportunities and Expectations

Reading Before Class:

Reading the assigned pages in the textbook is essential for success in this course. The assigned pages are noted in the class schedule, and you should read the pages before class to give you context for the lecture and boost your confidence for classroom participation. This will ensure you are giving yourself the best chance for success in this course. Also, note on the Lecture Schedule below that there are things you need to learn on your own outside of class time.

- *Helpful Tip: To prioritize more important content, refer to the lecture outline as you read the textbook.*

Taking Notes in Class:

Lecture outlines are provided on Canvas. Print, bring to class in an organized manner (e.g. three-ring binder), and take notes. I will try my best to video-capture every lecture and upload the recordings on Canvas, as a studying tool for everyone and in case someone has to miss class. See "Recording Notification" below.

- *Helpful Tip: Use different colored pens to take notes. E.g. pre-class skimming notes in pencil vs in-class notes in black pen; main theme in red vs other notes in black; your questions in blue vs my comments in black.*

Studying:

It is highly recommended that you study at least 2-3 hours for every unit or a college credit hour. Since Bio 1040 is a four-unit course, you should be studying 8-12 hours every single week—and not just the week prior to an exam. This studying should also be spread out during each week, not simply occurring before quizzes.

Note that "studying" is a separate section from "reading." Studying needs to be ***active***. If you need to re-read the textbook, of course you should. However, *simply* re-reading the textbook or watching recorded lectures is passive. Make sure that you not only ***memorize*** but that you also ***understand*** the material. For example, many students' favorite technique for memorizing is making and using flashcards. Make them yourself on paper. Shuffle the cards before testing yourself. Sort into 'done' vs 'work on' piles. Have someone else test you with their flashcards.

To understand the material, model in-class activities of quizzing each other (active recall!) and teaching each other; write your understanding of a topic and swap it with a classmate to see how it can be phrased differently; make a practice quiz and swap it with a classmate for authentic practice; etc. Note that the best active studying involves working together in community.

Additional Tools for Success:

Weekly Review Sessions will be offered by an experienced peer leader. Ryan Learning Center also provides Tutorial Services for individual and group tutoring. Peer tutors have been assigned to this course.

Electronic Devices Policy:

Please take out your electronic devices only when asked to do so. Electronic devices interfere with your learning and can be a distraction to your neighbors. Numerous research studies (some highlighted here) have confirmed that classroom electronics use is detrimental to learning.

1. You may think that you can multitask, but studies show you can't.

2. As already mentioned, using your laptop in class can be less than neighborly. Your classmates' grades can also suffer due to the distracting pull of the laptop.
3. Writing by hand is a more effective way of learning than is typing. With typing, each letter is pretty much the same thing for the brain. Writing, however, uses different muscle groups with each word and encourages the brain to integrate material during the writing process. Typing may be easy and fast, but by making the brain passive, it discourages learning. ("Why writing by hand beats typing for thinking and learning")
4. This study suggests that cellphone use in class can lower one's grade by *half a letter grade*.

However, I also recognize the value of having the lecture outline as you take notes in class. Many students have told me that they cannot afford to print the many pages of the lecture outline. You may use a device that allows you to "ink" on the notes. Handwriting either on paper or on your device is better for your learning than typing. For your sake and to avoid distracting other students, put it on airplane mode and do not use it for other purposes during class.

Assessment and Grading

Based on 1250 total points

Your grade for Bio 1040 and Bio 1040L will be calculated together and the same grade will be applied to both.

Lecture points: **880 points**

1) Participation and Collaboration (40 points in person + 10 points online) = 50 points
2) Friday quizzes (10 points/quiz x 6 quizzes) = 60 points
3) Lecture unit exams (100 points/exam x 5 exams) = 500 points
4) Lecture Final Exam (Cumulative) = 150 points
5) Small assignments = 100 points
6) End-of-Year Reflection = 20 points

Laboratory points: **370 points**

1) Laboratory Quizzes: 10 regular lab quizzes, lowest dropped (10 points/quiz) = 90 points
2) Laboratory Quizzes: 2 big lab quizzes (14 points + 16 points) = 30 points
3) Laboratory Worksheets: 7 lab worksheets (20 points/worksheet + 10pt wksh) = 150 points
4) Circulatory System Lab Practical = 100 points

Your letter grade will be determined from your cumulative percent score as follows:

A:	93.0—100%	**B-**:	80.0—82.99	**D+**:	67.0—69.99
A-:	90.0—92.99	**C+**:	77.0—79.99	**D**:	63.0—66.99
B+:	87.0—89.99	**C**:	73.0—76.99	**D-**:	60.0—62.99
B:	83.0—86.99	**C-**:	70.0—72.99	**F**:	≤ 59.99

- To model professionalism, I strive for honest and timely feedback, and transparency and fairness in grading. Scores for individual assessments are posted on Canvas Grades. Please ask about grades as soon as you have a question. Do not wait until the end of the semester. The course follows a straightforward point system, so there is no need for "negotiating" over letter grades at the end of the semester.
- Physical copies of grades are kept for one year from the end of the semester.

Lecture Points (880 total)

1) Participation and Collaboration:

We are expected to respect each other, have an openness of mind toward new points of view, and have curiosity for learning new material. You are expected to participate actively in all class activities in collaboration with classmates from diverse backgrounds.

Your active participation in class is critical to our collective understanding and growth. Make sure you prepare for every class in order to participate well. Simply attending class does not earn you 5 out of 5 points for a given recorded class. See Appendix 1: Participation and Collaboration Rubric to understand how you will be graded. Note that you can come to class and still get a 2 or 3 out of 5 points.

Participation and Collaboration will be recorded every class on a sheet of printed roster, then four random records will be entered into Canvas Grades at the end of the first quad (5 pts x 4 = 20 pts). Again, four random records will be entered into Canvas Grades at the end of the second quad (5 pts x 4 = 20 pts). If you are absent for a class meeting that happens to be selected, a zero will be entered. If the absence is excused due to an official University obligation (requiring prior notification from the administration and the student), you will receive a 3 out of 5. You can make up the "lost" points by participating on Canvas in the "Muddiest Point" Discussion boards. See below. There are no other forms of excused absences. I would appreciate a courtesy email about absences for illness, doctor's appointments, family circumstances, etc; but you are not required to, and these are not considered excused absences. You can make up the points by participating on Muddiest Point on Canvas; see below.

In addition to in-person participation and collaboration, *online* participation and collaboration is *required*, and graded out of 5pts total per quad. Post questions and answer others' questions on the Canvas Discussion Boards "Muddiest Point Quad1" & "Muddiest Point Quad2". Minimum requirement: at least one question (must be done by 4th week of each quad) and one answer (anytime before the end of the quad). See Canvas instructions.

There are several reasons for including online participation, which I implemented long before the COVID online switch. Having to think about what to ask has learning benefits, so everyone is required to ask at least one question. Explaining your answers to each other in writing is a great practice for exams, so everyone is required to answer at least once. Do not use AI; it defeats the purpose of having you practice. This student-to-student conversation has been very useful for many past students (e.g. get extra help with questions, feel like they're not alone in not knowing something, use as a study guide).

Extra online participation will make up for in-person participation for students who do not want to speak in class or must miss some classes. I also respect individual differences in comfort levels about speaking up in person, so if you choose to not speak up in front of the whole class in person, you can participate online instead. Sometimes, life happens and you miss class. If you earned anything less than 5pts from in-class Participation and Collaboration on a given day for any reason, you can earn back those points by participating online. Everyone is required to participate at a minimum level, and above that, active online participation will make up for low in-person participation. For example, if you choose not to speak up but pay good attention in class, you will probably end up with a 16 out of 20 in the in-person category. If you want to bring that up to a 20 out of 20, you can be more active on Muddiest Point with questions and/or answers. See Canvas for more details. Note that this is not extra credit, because the highest score possible from Participation and Collaboration is 50 out of 50 for the semester. (However, the number of absences may not exceed 20% of class meetings as specified in "PLNU ATTENDANCE AND PARTICIPATION POLICY" below.)

I hope you can tell from the large amount of information in this section that I truly care about active participation from individual students and about collaboration between students. You are an active agent in your own learning, and we are learning together in community.

2) Friday Quizzes:

Research shows that frequent quizzing is an effective learning tool. At the beginning of every Friday class, unless there is an exam, you will take a 10-point quiz. Quiz includes multiple-choice questions and short-answer questions, in the same style as exams. Don't worry if you happen to miss a quiz or do poorly on a couple; only your *six* best scores will count toward the semester grade. The other lower scores are dropped. Quizzes must be taken in class or at the EAC. **No makeup quizzes.**

3) Lecture Unit Exams (non-cumulative):

A 100pt unit exam will be given on the dates indicated in the Tentative Lecture Schedule. Exams can only be rescheduled with advance notice and with an official University obligation (requiring prior notification from the appropriate university official and the student). Each exam has 40 multiple-choice questions (80 pts total) and several questions requiring written answers (20 pts). Exams must be taken in class or at the EAC. A late penalty of 10% (minus 10pts from the score) per calendar day will be applied in case an exam is missed and a makeup exam is given.

4) Lecture Final Exam (cumulative):

The Final Exam is cumulative and worth 150 points (which is only 12.5% of the final grade). According to the University's Final Exam Schedule, ours is scheduled for Wednesday, May 7 at 1:30pm. The Final Exam cannot be rescheduled except in extenuating circumstances. The exam must be taken in class or at the EAC.

5) Small Assignments:

Several small assignments (each one approximately 5 pts) will be given throughout the semester as encouragement to read before class, for formative assessment, and to provide constructive feedback. Homework assignments may include Visible Body assignments, open-book pre-class reading quizzes on Canvas, etc. Most homework assignments are due on Canvas. Late homework is accepted, but Canvas is set up to take 10% off for being late, starting from the second it is late and taking 10% off more every 24 hours. See Canvas for more details.

6) End-of-Year Reflection:

At the end of the spring semester, you will be asked to reflect on how you grew as a student through A&P and then reflect on how you grew as a person through the connections between A&P and all your other college experiences this academic year. See Canvas for more details.

Lab Points (370 points total) and Other Information About Lab

Attendance:

Attendance in laboratory is mandatory. You are expected to stay for the **entire scheduled laboratory period**. If you do not attend or fail to complete the scheduled laboratory, you will not receive any credit for that particular lab. This penalty also applies to the dissection labs; individuals who do not fully participate in the dissection labs will have 25pts subtracted from their lab practical score for each missed dissection period. If you anticipate missing your scheduled lab section, you *might* be able to attend another lab section during that same week. Such a switch requires **prior** permission (because I may need to ask a Tue or Wed instructor to fit you in) and should not be viewed as an automatic privilege.

Lab Packets:

Prepare for lab by reading the assigned packet/handout ahead of time (Canvas). Check in advance which pages require printing for a given day. While I will allow you to leave lab for a few minutes to print, your absence will be a burden on your lab group.

1) Laboratory Quizzes:

As indicated on the Laboratory Schedule, quizzes will be administered at the start of lab period. If you are late for lab, you will have less or no time to take the quiz. Lab quizzes are not dropped. Lab quizzes cannot be made up unless it is due to an official University obligation (requiring prior notification from the administration and the student).

2) Laboratory Worksheets:

Eight of the lab handouts require that you complete a worksheet during the lab period and submit it. The 20-point worksheet will be due at the end of the lab period. You **cannot** submit a worksheet for a lab you did not attend. It is important that you recognize that these laboratory write-ups must **reflect your own work**, and not someone else's. You can—and should—discuss the assignment with your classmates, but you cannot copy their answers. Students who hand in identical answers will not be given any credit for that assignment. **You must submit all your lab worksheets on full-size printouts.**

3) Circulatory (Cardiovascular) System Lab Practical:

The circulatory/cardiovascular system laboratory practical is scheduled for **Tuesday, February 25** (not on Thu). Prior to the exam, you will be asked to indicate which time(s) are amenable to your schedule. If you anticipate conflicts, please do your best to clear them well in advance. The laboratory practical will be worth 100 points.

Laboratory Safety and Clean-Up:

- No food (including gum) or water in the laboratory.
- Keep all backpacks and other personal belongings completely under the lab bench, such that no one could possibly trip over these items. (The cubbies are for cat storage.)
- Enclosed shoes are mandatory. Open-toed or open-back shoes (sandals, clogs, Crocs, slippers etc) are not permitted. You will be asked to leave without proper footwear.
- Clothing must cover and protect the body from shoulders to knees. Wear a lab coat or old clothing that you do not mind getting dirty.
- Mandatory on dissection days:
    - Dissection kit
    - Safety glasses
    - Bring a writing utensil that you don't mind getting dirty from the cat preservatives. You may keep a writing utensil, lab packet printout, dissection kit, and/or safety glasses in the cat cubby until review lab.
    - Tie long hair and remove or tuck in any loose-hanging accessories (e.g. lanyard, necklace, hoodie strings, bracelets).
- At the end of each laboratory period make sure that your table and the equipment have been cleaned. Return the equipment to its appropriate place. Points are deducted for messes not cleaned up.

Technology Policy

On occasion, we will use laptop computers in the lab. During lecture, however, laptops interfere with your education and distract your neighbors. Numerous studies (some highlighted here) have confirmed that classroom laptop use can be detrimental to learning. Students do not learn as well when they type their notes as opposed to hand-writing. Easy access to the internet is distracting. For these reasons, I do not allow the use of laptops, phones, or other internet-accessing electronic devises in the classroom. An exception to the "no device" rule is if you use the inking function on your tablet device.

1. Laptops and other electronic devises enable more than just note-taking, introducing numerous distractions (web-surfing, homework for other classes, social media, etc.) for you and your neighbors. You may think that you can multitask, but studies show you can't. http://www.slate.com/articles/health_and_science/science/2013/05/multitasking_while_studying_divided_attention_and_technological_gadgets.html
2. Using your laptop in class is bad for those around you. Your classmates' grades can also suffer due to the distracting pull of the laptop. https://www.sciencedirect.com/science/article/pii/S0360131512002254
3. Writing is a more effective way of learning material than is typing. With typing, each letter is pretty much the same thing for the brain. Writing, however, uses different muscle groups with each word and encourages the brain to think during the writing process. Typing may be easy and fast, but by making the brain passive, it discourages learning.

- https://www.npr.org/2016/04/17/474525392/attention-students-put-your-laptops-away
- https://www.npr.org/sections/health-shots/2024/05/11/1250529661/handwriting-cursive-typing-schools-learning-brain

4. Using electronic devises in class also impairs long-term retention, with one study suggesting that cellphone use in class can lower one's grade by half a letter grade. https://www.insidehighered.com/news/2018/07/27/class-cellphone-and-laptop-use-lowers-exam-scores-new-study-shows

Artificial intelligence (AI) policy

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc.) in this course. In fact, we will engage it actively in class. Any work that utilizes AI-based tools must be clearly identified as such, including the specific tool(s) used. Please use the following sources to guide your citations when using AI. Both APA (American Psychological Association) and AMA (American Medical Association) styles of citation are acceptable in this course. Be consistent in your citation style within a given assignment.

- APA Style: How to Cite ChatGPT
- AMA Style: AMA Software and AI

Recording Notification

In order to enhance the learning experience, please be advised that this course may be recorded by the professor for educational purposes, and access to these recordings will be limited to enrolled students and authorized personnel. Note that all recordings are subject to copyright protection. Any unauthorized distribution or publication of these recordings without written approval from the University (refer to the Dean) is strictly prohibited.

Content Warning

I acknowledge that each of you comes to PLNU with your own unique life experiences. This contributes to the way you perceive various types of information. In Bio 1030, all the class content, including that which may be intellectually or emotionally challenging, has been intentionally curated to achieve the learning goals for this course. The decision to include such material is not taken lightly. These topics include several diseases which may have affected you, family members or friends. We will also examine human cadavers in lab. If you encounter a topic that is challenging for you, it can manifest in feelings of discomfort and being upset. In response, I encourage you to come talk to me about it. Class

topics are discussed for the purpose of expanding your intellectual engagement in Human Anatomy and Physiology, and I will support you throughout your learning in this course.

PLNU FINAL EXAMINATION POLICY

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the Traditional Undergraduate Records: Final Exam Schedule. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for one of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university withdrawal date or, after that date, receive an "F" grade. See Appendix 2 for details.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See Academic Policies for definitions of kinds of academic dishonesty and for further policy information.

The laboratory portion of the course has two practical exams. Since these exams are administered in the lab, they cannot be given to the entire class at once but must instead be given to smaller groups of students at separate times. Any discussion of the content of the exam between a student who has taken the practical exam with another student who has yet to take the exam will be considered to be cheating on the part of both students, and dealt with as described above.

PLNU POLICY ON SEXUAL MISCONDUCT AND DISCRIMINATION

PLNU faculty are committed to helping create a safe learning environment for all students. If you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that help and support are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, it is required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu or find a list of campus pastors at https://www.pointloma.edu/title-ix.

If you (or someone you know) have experienced other forms of discrimination or bias, you can find more information on reporting and resources at www.pointloma.edu/bias.

PLNU STATEMENT ON LANGUAGE AND BELONGING

PLNU faculty are committed to helping create a safe and hospitable learning environment for all students. As Christian scholars we are keenly aware of the power of language and believe in treating others with dignity. As such, it is important that our language be equitable, inclusive, and prejudice free. Inclusive/Bias-free language is the standard outlined by all major academic style guides, including MLA, APA, and Chicago, and it is the expected norm in university-level work. Good writing and speaking do not use unsubstantiated or irrelevant generalizations about personal qualities

such as age, disability, economic class, ethnicity, marital status, parentage, political or religious beliefs, race, gender, sex, or sexual orientation. Inclusive language also avoids using stereotypes or terminology that demeans persons or groups based on age, disability, class, ethnicity, gender, race, language, or national origin. Respectful use of language is particularly important when referring to those outside of the religious and lifestyle commitments of those in the PLNU community. By working toward precision and clarity of language, we mark ourselves as serious and respectful scholars, and we model the Christ-like quality of hospitality.

If you (or someone you know) have experienced a bias incident regarding language, you can find more information on reporting and resources at www.pointloma.edu/bias.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on State Authorization to view which states allow online (distance education) outside of California.

Tentative Lecture Schedule

Wk #	Date	Topic *Review topics (textbook page #)*	Textbook pages
1	Jan 13 (M)	Spinal Reflexes *nervous system (452-457); neurons (459); spinal cord (509-510)*	chp. 14 pp. 539-542, 577-578
	On Your Own	Categorizations of Sensory Receptors	
	Jan 15(W)	General Senses (of skin) Chemical Senses: Gustation and Olfaction *cranial nerves (522-525)*	chp. 14 pp. 542-546
	Jan 17 (F)	Visual System *cranial nerves (522-525); motor units (373-374)*	chp. 14 pp. 552-558

2	Jan 20 (M)	**Martin Luther King Day**		
	Jan 22 (W)	Visual System *cranial nerves (522-525)*	chp. 14	pp. 552-558
	Jan 24 (F)	Ear Anatomy *cranial nerves (522-525)*	chp. 14	pp. 546-551
		Last day to drop semester courses (no record on transcript)		
3	Jan 27 (M)	Inner Ear Function: Hearing & Proprioception *cranial nerves (522-525)*	chp. 14	pp. 546-551
	Jan 29 (W)	Autonomic Nervous System *brain (500-508); cranial nerves (522-525); spinal cord (509-510)*	chp. 15	pp. 589-620
	Jan 31 (F)	**EXAM 1** *Covers lecture material, on your own material and cranial nerves 1/13—1/27 (6 lectures)*		
4	Feb 3 (M)	Overview of Endocrine System *exocytosis (90); glands (137-140)*	chp. 17	pp. 661-673
	Feb 5 (W)	Pituitary and Hypothalamus *diencephalon (504-506)*	chp. 17	pp. 673-680
	Feb 7 (F)	Other Endocrine Glands *Ca^{++} homeostasis (217-220); sympathetic NS (590-593)*	chp. 17	pp. 680-692
5	Feb 10 (M)	Male Reproductive System *steroids (67-68); pituitary and hypothalamus (673-674)*	chp. 3 chp. 27	pp. 107-121 pp. 1186-1196
	Feb 12 (W)	Female Reproductive System *steroids (67-68); pituitary and hypothalamus (673-674)*	chp. 27	pp. 1196-1212
	Feb 14 (F)	**No class: PLNU President's Inauguration**		
6	Feb 17 (M)	**EXAM 2** *Covers lecture material 1/29—2/12 (6 lectures)*		
	Feb 19 (W)	Heart Anatomy and Histology *membrane junctions (132); serous membrane (129-130); skeletal muscle fibers (359-369)*	chp. 19	pp. 751-767
	Feb 21 (F)	Cardiac Cycle & Heart Electrical Properties Day 1 *action potentials and skeletal muscle (473-475)*	chp. 19	pp. 772-787
7	Feb 24 (M)	Cardiac Cycle & Heart Electrical Properties Day 2 *action potentials and skeletal muscle (473-475)*	chp. 19	pp. 772-787
	Feb 25 (Tu)	**Lab Practical Exam—all sections**		
	Feb 26 (W)	Regulation of Cardiac Output *autonomic nervous system (589-620)*	chp. 19	pp. 788-799
	Feb 28 (F)	Blood Vessels *histology (139-140)*	chp. 20	pp. 810-820
8	Mar 3 (M)	Blood Flow and Blood Pressure *reflex arc (599)*	chp. 20	pp. 821-830
	Mar 5 (W)	Blood *osmosis (86-87); bone marrow (194, 197)*	chp. 18	pp. 711-743
	Mar 7 (F)	**EXAM 3** *Covers lecture material 2/19—3/5 (7 lec)*		
	March 10-14	**Spring Break**		

9	Mar 17 (M)	Blood *bone marrow (194, 197)*	chp. 18	pp. 711-743
	Mar 19 (W)	Innate Immunity *plasma membrane (82-84); phagocytosis (89); skin (164-167); hypothalamus (505-506)*	chp. 21	pp. 905-912
	Mar 21 (F)	Adaptive Immunity *blood grouping & typing (739-743)*	chp. 21	pp. 912-934
10	Mar 26 (W)	Lymphatic System *osmosis (86-87)*	chp. 20 chp. 21	pp. 830-832 pp. 894-905
	Mar 26 (W)	Respiratory System Anatomy & Volumes *epithelial tissues & glands (130-140); cartilage (145-146); olfaction (544-545); autonomic nervous system (589-620)*	chp. 22	pp. 947-961, 965-967
	On Your Own	Pulmonary Air Volumes and Capacities		
	Mar 28 (F)	Ventilation *inflammation (910-911); autonomic nervous system (589-620); pH (58-60); reflex arcs (599)*	chp. 22	pp. 961-970
		Last day to withdraw from semester courses ("W" on transcript)		
11	Mar 31 (M)	Gas Exchange, O_2 transport *hemoglobin (722)*	chp. 22	pp. 970-979
	Apr 2 (W)	CO_2, Respiratory Pathologies *pH (58-60)*	chp. 22	pp. 979-983
	Apr 4 (F)	**Exam 4** *Covers lecture and on your own material 3/17-3/31*		
12	Apr 7 (M)	Urinary System Anatomy *membrane transport (84-90); capillaries (814-816)*	chp. 25	pp. 1109-1125
	Apr 9 (W)	Urine Production *osmosis (86-87); capillaries (814-816)*	chp. 25	pp. 1119-1146
	Apr 11 (F)	Regulation of Urine and Body Fluid *posterior pituitary (675-676); adrenal cortex (688-689)*	chp. 25	pp. 1119-1146
13	Apr 14 (M)	Regulation of MAP and Urine Volume	chp. 26	pp. 1119-1146
	Apr 16 (W)	Water Balance; pH Balance *pH (58-60); control of respiration (967-969)*	chp. 26	pp. 1155-1179
	Apr 18 (F)	**Easter Break**		
14	Apr 21 (M)	**Easter Break**		
	Apr 23 (W)	Digestive Processes; GI Anatomy *exocrine & endocrine glands (137-140); serous membranes (129-130)*	chp. 23	pp. 995-1047
	Apr 25 (F)	**Exam 5** *Covers lecture material 4/2-4/16 (6 lec)*		
15	Apr 28 (M)	Accessory Digestive Organs and Digestion *exocrine & endocrine glands (137-140); enzymes (54); pH (58-60); organic molecules (61-74)*	chp. 23	pp. 995-1047
	Apr 30 (W)	Large Intestines; GI Pathologies *osmosis and tonicity (86-87)*	chp. 23	pp. 995-1047
	May 2 (F)	Pancreas and Diabetes Mellitus *pH (58-60); carbohydrates (62-65); oxygen transport (975-979); control of respiration (967-969); tubular reabsorption (1128-1133)*	chp. 17	pp. 693-697

	May 7 (W)	**FINAL EXAM** **1:30—3:30pm**

Laboratory Schedule

Wk #	***Thu date***	***Lab Exercise***	***Quiz***
1	1/16	Reflexes, Sensory Receptors, and Cranial Nerves	*Pre-lab quiz: cranial nerves & Categorization of Sensory Receptors*
2	1/23	Circulatory System Anatomy Day 1 Sheep Heart Cat Veins	*Post-lab quiz: Reflexes, Sensory Receptors, and Cranial Nerves*
3	1/30	Special Senses	*Pre-lab quiz: Special Senses*
4	2/6	Circulatory System Anatomy Day 2 Cat Thoracic Arteries Human Heart Model	*Post-lab review quiz: CV Anatomy Day 1*
5	2/13	Circulatory System Anatomy Day 3 Cat Abdominal Arteries Cat Organs Human Cerebral Arteries	***14 pt** review quiz: CV Anatomy Day 1 & 2*
6	2/20	Circulatory System Anatomy Day 4 Review	***16 pt** review quiz: CV Anatomy Day 1, 2, and 3*
7	**Tue 2/25** (no lab on Thu 2/27)	**Laboratory Exam: Cardiovascular Practical Tuesday, February 25 for all sections**	
8	3/6	Cardiovascular Physiology	*Pre-lab quiz*
NO LAB—Spring Break			
9	3/20	Diagnostic Blood Tests	*Pre-lab quiz*
10	3/27	Visit to Cadaver Lab	*quiz*
11	4/3	Blood Typing & Respiratory Physiology	*Pre-lab quiz*
12	4/10	Urinalysis	*Pre-lab quiz*
13	NO LAB—Easter Break		
14	4/22	Osmosis and Tonicity	*Pre-lab quiz*
15	5/1	Optional review sessions - TBA	

Appendix 1: Participation and Collaboration Rubric

adopted from Kendra Hearn, PhD (U of Michigan, Ann-Arbor)

	2	3	4	5**
Active Listening*	Student has incurred 2 or more instances of unprofessional or inattentive behavior during class. On multiple occasions, s/he uses technology for purposes not related to the course and/or in ways that are distracting to peers and/or the instructor. S/he often has side conversations that are distracting to those around him/her. S/he does not track the speaker with his/her eyes (e.g. head down on desk).	Students is typically professional and attentive during class**. S/he has uses technology for purposes not related to the course and/or in a way that is distracting. S/he has occasional side conversations that are sometimes distracting to those around him/her.** S/he rarely tracks the speaker with his/her eyes or use non-verbal cues to engage with the speaker.	Student is always professional and attentive during class. S/he uses technology for the purposes of the course and is not distracting. S/he limits side conversations; those in which she may engage are always about what is currently occurring in the class. S/he often tracks the speaker with his/her eyes.	Student is always professional and attentive during class. S/he uses technology for the purposes of the course and is not distracting or easily distracted. S/he doesn't have side conversations. S/he routinely tracks the speaker with his/her eyes, and uses non-verbal cues to engage with the speaker. S/he routinely uses techniques to ensure understanding, such as asking or answering questions.
Contributions to Discussion and Activities	Student's contributions are disrespectful or shows unwillingness to learn, or s/he does not contribute.	Student's contributions are respectful and inclusive. S/he may, however, contribute rarely or contributes often but dominates the 'air' time. When s/he speaks, his/her comments may be tangential or confusing to the current direction of the group.	Student's contributions are respectful and inclusive. They position him/her as active learner of the topic. S/he watches his/her 'air' time by not dominating the discussion.	Student's contributions are respectful and inclusive. They position him/her as an active learner of the topic. S/he watches his/her 'air' time by not dominating the discussion. His/her comments and questions often improve the thinking of the group.
Preparedness	Student exhibits minimal preparedness in that it is apparent that s/he has read little or none of the materials prior toclass as evidenced by no references to the required materials during discussion. S/he does not bring appropriate notes.	Student exhibits moderate preparedness in that it is apparent that s/he has read some of the materials prior to class as evidenced by nominal references to the required materials and bringing appropriate notes.	Student exhibits sufficient preparedness in that it is apparent that s/he has read the materials prior to class by citing references to those materials during class. S/he brings appropriate notes to class.	Student exhibits good preparedness in that it is apparent that s/he has read all materials prior to class by accurately citing references to those materialsduring discussions and bringing annotated notes to class. It is clearly apparent that s/he has given depth of thought to the topic as his/her comments, questions,and ability to respond to questions.

* Merely attending class does not merit 5 out of 5 points.

** Asking questions is a type of contribution.

Appendix 2: Alignment with Program Learning Outcomes

The Human Anatomy and Physiology I & II sequence is offered through the Biology Department (Bio 1030 & 1040). Nursing, Applied Health Science, Health and Human Performance, Dietetics, and Nutrition programs require Bio 1030 & 1040, so the vast majority of students taking Bio 1030 & 1040 major in one of those programs. It does count as their Life Sciences FE option if a student were to change into a major that does not require the sequence. The following are one or two PLO(s) from each program that align(s) best with the Learning Outcomes of Bio 1030 & 1040:

Nursing:

- Inquire Faithfully: The student will demonstrate knowledge, skill, and behavior of the evidence-based practice of nursing which integrates growth in reasoning, analysis, decision-making, and the application of theory with the goal of advocating for others and/or self. This includes holistic nursing skills and the nursing process.

Applied Health Science:

- Describe the mechanisms (i.e. metabolic, physiologic, biomechanical, and developmental) by which physical activity aids in health care settings.

Health and Human Performance:

- Describe the mechanisms (i.e. metabolic, physiologic, biomechanical, and developmental) by which physical activity aids in health promotion, performance enhancement and disease prevention.

Dietetics:

- Apply critical thinking skills.

Nutrition:

- Demonstrate critical thinking skills and analytical abilities to identify and solve problems in nutritional science.
- Critically evaluate and interpret research for various life-cycle stages and develop practical approaches to address specific nutrition-related conditions and diseases within the life-span.