

# **Biology 387: Human Anatomy Syllabus**

## **Course Overview:**

<b><i>Spring Times:</i></b>	Lecture:	CBB 131	MWF	2:00 p.m. – 2:50 p.m.
	Lab 2:	CBB 320	R	2:00 p.m. – 4:50 p.m.
	Lab 1:	CBB 320	F	9:00 a.m. – 11:50 a.m.

***Exams:*** Exams take place over the 6<sup>th</sup> and 11<sup>th</sup> weeks, as well as over final's week. The final is not cumulative (both likely on the last day of finals, times TBD). **All exams / finals take place in the lab!**

***Instructor:*** Lindsay R. Dresang, Ph.D.  
Office: CBB 313  
Office hours: Tuesdays and Thursdays @ 11:00 a.m. (in person or via zoom),  
or schedule an appointment / drop by the lab or my office  
E-mail: [LDresang@uwsp.edu](mailto:LDresang@uwsp.edu)  
Phone: not currently available

***Formal Course Description:*** (Prereq = One of the following.: BIOL 101 & HS 295, or BIOL 111/160/285/286/287/385)  
Examine human anatomy using models, diagrams, X-rays, digital media, histology, and prosected cadaver demonstrations. Complements BIOL 385 to provide general background in human structure and function. Recommended for students interested in medicine, physical therapy, pharmacy, dietetics, and related health fields.

***Course Objectives:*** Anatomy has layers upon layers of detail. While the amount of material covered in this class is daunting, it will prepare a wide range of students interested in continuing their education in several related topics, from graduate-level anatomy, to pathology, neurobiology, and even assessments of diet & nutrition impacts on organ systems. In this class you will:

- 1) Learn and apply the language(s) of anatomy, including how to define spatial relationships between different structures in anatomical position;
- 2) Evaluate how multiple organ systems are arranged within a specific region, both in two- and three-dimensions;
- 3) Relate structures of embryonic and fetal development to the final adult structures;
- 4) Recognize how each major organ's structure, histology, and/or overall position is related to its function; and
- 5) Apply structure and function relationships in various clinically-relevant pathologies, common injuries, sources of pain and damage, or related contexts.

Informally, you will also be trained to recognize patterns in anatomy & histology. *Without pattern recognition, studying this course would be impractical.*

***Required Materials:*** Bring these materials to class every day.

**Course Packet "BIO 387: Human Anatomy"** by your instructor, available at the bookstore (ZERO profits are made from the sale of this course packet per regulation under copyright fair use agreements; its price is for printing and shelving)

**Human Anatomy** by Marieb, Wilhelm, and Mallat, 8<sup>th</sup> Ed.

## ***Highly Suggested Resources:***

**A Photographic Atlas for Anatomy & Physiology** by Hebert, Heisler, Krabbenhoft, Malakhova, and Chinn, 1<sup>st</sup> Ed.  
(the only reason this resource is not required is that it is a paper, unbound copy that does not lend well to the text rental system)

***Optional Resources:*** There are many different reference textbooks, or even digital applications, which you may find useful while studying this topic. I hesitate to list potential apps, as they can really start to add up with each module that you buy,

and certain apps are better suited to different electronic devices. Feel free to garner opinions from tutors, TAs, other students who have taken the class, etceteras. Here are some resources which are available at the bookstore or on the course website:

**An Atlas of Human Anatomy** by Netter, 5<sup>th</sup> Ed., but ANY edition will do fine (this supplemental atlas is used frequently in many medical/health programs; it comprehensively highlights structures in a particular view, which can be intimidating; even the coloring book is fairly useful)

**Lippencott Williams & Wilkens Atlas of Anatomy** by Tank and Gest, 1<sup>st</sup> Ed. (an alternate supplemental atlas which focuses on a select group of structures in a particular view at a time; it is less comprehensive than the Netter series, but that can have its advantages at times)

**A Visual Analogy Guide to Human Anatomy** by Krieger, 4<sup>th</sup> Ed. (somewhere between a coloring book and a study guide; it is helpful if you really don't have any background in the topic as it makes excellent visual analogies; others may find the resource too basic)

**The Anatomy Coloring Book** by Kapit and Elson 4<sup>th</sup> Ed. (somewhere between a coloring book and a full textbook; it is helpful if you really love to draw/fill in drawings to learn; others may find the resource way too dense)

**Course Website Handouts** posted under "extras" folders of units 1, 2, and 3 (these resources are available should you be interested in additional information about a particular topic...if you are able to relate anatomy with something else you are more interested in, like diet or dinosaur bones, it might help you remember concepts)

**BIO 399 Project Reviews** posted on the course website (teaching assistants supervise open lab sessions, while also working on an independent study topic chosen between student and instructor; these projects give TA's an idea of what creating course resources is like, while also learning additional details about their topic; these projects are carefully reviewed by the instructor throughout their formation; students find them very helpful!!!)

*If you are interested in completing a BIO 399 project after you have completed this course, let me know.*

**Model Pictures & Keys** posted on course website (there are a LOT of pictures for most of the available models, in addition to their keys when applicable, but be aware that not every image may be as crisp as you'd like or show the number you're trying to find...in other words, yes, you still have to study the models in lab; you can take your own pictures to study at home, but you cannot post pics on unsecured websites, not even facebook)

**X-ray Library** posted on the course website (only a few resources have been put together as a teaching assistant project, otherwise the images are unlabeled; 2 X-rays will be used on each exam)

**Practice Quizzes/Exams** available on the course website (while not required, these quizzes will help you prepare for in-lab quizzes, as well as for the upcoming exams...some of the questions will even be identical)

**Lectures & Labs:** In class I will discuss materials from the textbook, course packet, materials on the course website, and provide demonstrations with anatomical models, X-rays, prosected cadavers, and other materials. Recordings of lectures and lab discussions will be posted on the course website, but no recording is ever guaranteed or fool-proof. While the course packet is your primary resource for what will likely be on the test, portions of the packet are designated for you to fill in **on your own!** The study of anatomy requires your outside commitment to the material *in addition* to what is covered in class. Supervised open lab times and digital libraries of the anatomical models & X-rays are available for outside class review. Cadavers will not be used for exams; X-rays will be used on exams.

### **Course Requirements and Grading:**

***Letter Grades (rounded at the hundredths):***

	A = 100-94%	A- = 93.9-90%
B+ = 89.9-86%	B = 85.9-82%	B- = 81.9-78%
C+ = 77.9-74%	C = 73.9-70%	C- = 69.9-66%
D+ = 65.9-62%	D = 61.9-60%	F ≤ 59.9%

*\*B+ or better is needed for enrollment in BIO 487, a Survey in Human Dissection...your attendance, professionalism, and consistent participation are also evaluated...you could earn a B and be let in, or you could earn an A and not be let in.*

### Point Distribution (pts = points):

Your grade will be based out of **400 points**; it will be *possible to earn 440 points* in this class. Here are your possible itemized points:

Graded Item	“Out of”	(Available)	Frequency	Base Pts	(Possible)
Exams	@ 100 pts	(108 pts)	× 3		
Scantron	@ 50 pts	(54 pts)	× 3	= 150 pts	(162 pts)
Practical	@ 50 pts	(54 pts)	× 3	= 150 pts	(162 pts)
#Quizzes	@ ~9pts	(~9 pts)	× ~12	= 100 pts	(100 pts)
#Worksheets	@ 0pts	(-6 pts*, up to 1pt)	× ~10-ish	= 0 pts	(-60pts* to 8pts)
Outside Extra Credit	*optional*	(4 pts)	× 2	= 0 pts	(8 pts)
<b>Final</b>				<b>400 pts</b>	<b>(440 pts)</b>

\*Incomplete worksheets count against your overall grade.

#Quizzes & Worksheets may be combined or split per topic, and they may be assigned in class to be turned in the same day or as a take-home to be handed in later.

**Exams:** Each exam will have both a practical component and a scantron-based component. Both parts of the test will be taken at the same time. For the practical component, no word bank is provided, and spelling is taken into careful consideration. For some anatomical terms, a single letter change may drastically alter its meaning (i.e., abduct vs. adduct are opposing motions), whereas other terms may have multiple names or alternate spelling possibilities. Because of this variability, **I cannot give you a simple guideline of how much partial credit will or will not be awarded when one or two letters are out of place.** If spelling is not your strong suit, you will want to incorporate spelling into your study habits. The scantron used on exams may have more than one letter to fill in for your answer. The types of questions will include matching of terms, diagrams, cross-sections, double-column matching, and “multiple-multiple” choice questions. Scantron entries are final, so make sure you remember to “bubble-in” all of your answers. *Any exam copies withheld or copied digitally will result in **forfeiture of your exam grade!*** Exam questions are incredibly similar to quizzes/practice exams, and occasionally they are identical.

**Quizzes:** Quizzes will all be taken digitally on canvas outside of class time. The number of points per quiz will vary based on the amount of content discussed for that quiz. Quizzes will also be timed according to their intensity. There will typically be 3 quizzes per unit, usually timed between 20-50 minutes (~1¼ minutes per question). Quiz questions will involve practical identification of structures on the models, as well as questions similar to the types of “scantron-based” questions described above. You have 2 attempts on each quiz with the higher grade being retained. Not all questions will be the same from attempt to attempt or person to person (they randomize).

**You will be allowed to use your course packet, notes, your textbook, lab partner’s advice...they are OPEN NOTE!** You can’t submit a quiz as a group, though, so make sure you each submit your own. The “due date” for the quizzes is usually a couple days to right after the content is completed in class, but it will stay open for 1-2 days extra. There are some exceptions nearing exam dates, but you can always verify these dates by looking at the quizzes tab on canvas and then clicking on them before attempt them. **WARNING:** Fill-in-the-blank style questions are picky! You will see the answers to the quiz just after submitting it, but then they will disappear. You can see then how close you were, and if you really only were off, say because you made a singular form of a term plural, then I will add back the points. **Please wait to email me regarding “add-back” points until AFTER I announce that they are done for that particular quiz!** I won’t start on add-back points until after the hard deadline of when the quizzes become inaccessible.

The point of these quizzes is to force you to:

- 1) maintain a consistent study pace over each unit,
- 2) keep up in taking notes,
- 3) study the models in lab (not just the pictures),
- 4) recognized the types of questions you will encounter for the exams, and
- 5) get in the habit of discussing challenging material with me and/or your peers.

If you are confused by a question on the quiz, SPEAK UP! It does you no good working as part of a group that speeds through questions if you aren’t given the chance to contribute, or at least being given the chance to say, wait, back up, I didn’t understand that one, can you help me understand it!!!!

**Quizzes & Practice Exams vs. The REAL Thing!:** As stated above, exams will be remarkably similar to the quizzes. A practice exam will also be provided (purely optional and not for credit), which will open about a week before the exam (2 attempts allowed). Major differences are that quizzes permit partial credit on multiple-choice questions, whereas exams are set up as ALL-OR-NONE! Also, instead of looking at still images of the models, you will be in lab at a station with the structure tagged. On the one hand you are given a greater context to make your decision as to what the structure is...on the other hand, if you've only been reviewing pictures, you could be in trouble!

**Worksheets:** Worksheets usually involve an activity assigned in lab/lecture (group or individual) which gets you out of the habit of only looking at the pictures, and ensures an immersed study of anatomical structures. Examples include identification exercises, clinical application problem solving, pathway recognition, etc. Worksheets are graded more heavily on their completeness and attempt to answer all questions, not *necessarily* accuracy. They are intended to provide focus to a particular set of structures tackled in lab/lecture. Too often students review material in their books and leave early, or figure they will master as much as they can on just the bones and then have very little time to try and cram in the muscles. I am trying to break these habits.

If you miss an activities-based worksheet due to quarantine, illness, or another acceptable excuse (Dr. apt., sick child, military training day, a family wedding, you know, stuff you can't exactly plan/control the dates) it will be possible to make up the activity either in an online format or a pre-arranged alternate lab. Please let me know if you need to attend a different lab section. **Failure to complete a worksheet results in a deduction of up to 6 points!** Select questions may be graded for correctness; they will not be highlighted for you to tell which require accuracy.

**Extra Credit Write-ups/Talks/Activities:** It is possible for you to earn outside extra credit, up to a maximum of 8 points. Specific details will be posted on Canvas (the "start here" module).

#### **Lab Notes:**

**FACE MASKS ARE MANDATORY** unless you have a note through an approved student services group (they also email me directly if this is the case). If this policy changes, I will make an announcement. Open labs or one-on-one tutoring in the labs also require face masks. Please wash or sanitize your hands at the start at the start of lab! **Be sure to spray models with the CORRECTLY MARKED DISINFECTANT after you are done using the models, likely at the end of lab. IF YOU USE THE WRONG SPRAY IT MELTS THE PLASTIC!!!** No unauthorized visitors are allowed in lab.

Please let me and/or overseeing teaching assistant/tutors (for outside open labs) know if you accidentally break something; do not have me assume the worst. Small parts are also easily lost, so please reassemble and move the models to the side countertops after you are done studying them (still disinfect them). Several complex models have their own container, but even if they don't and you can't figure out how to reassemble a model, at least put all the pieces together in one spot and set them aside for me to put back together later.

**Tutoring in Lab:** Outside lab availability is purely at the instructor's discretion, as well as the availability of tutors and teaching assistants (during this term, **MASKS WILL BE REQUIRED AND ATTENDANCE WILL BE TAKEN!**). Tutors and teaching assistants may need priority use of the available models, and they may also need to close lab early/suspend an open lab session according to unexpected scheduling conflicts. Please give tutors, teaching assistants, and myself your respect. Group tutoring schedules and open lab times supervised by teaching assistants will be announced sometime after the first week of class. Requests for one-on-one tutoring may be conducted in the lab, of course, they can also be arranged in the tutoring and learning center as well in accordance with their hours (a few anatomical models are even available over there).

**Open Lab Policy:** Should vandalism or theft arise, open lab times will either be restricted or abolished completely. Additionally, if there is an issue with contact tracing / quarantining / etc. due to the COVID pandemic which makes open lab untenable, they may have to close as well (if that happens, I will set up additional virtual office hours). I encourage group work in the lab, but please be mindful of others studying around you. Group work can occasionally get noisy if you forget your surroundings. It is still acceptable to carry on normal conversation, and even take quizzes in groups during open lab. Designated quiet open lab times are possible, but only arranged on an as-needed basis. No, models **CANNOT** be checked out from open lab...sorry!

### **Electronic Devices:**

Please arrive to lecture on time and silence your cellphone or turn it off! You are allowed to use cell phones to take notes, but be aware that the models are copyrighted. You therefore cannot post pictures of the models on publicly-accessed websites. Inappropriate use of electronic devices may result in your forfeiture of their use in class.

### **Absence Policy:**

While you are not required to attend lecture and lab beyond the first few days of class, should you not attend class regularly it will be to your downfall. Anatomy is not a subject you can learn on your own just by reading a textbook (at least, not very well). **It is imperative that you study the anatomical models in lab and work with others! If you are unable to attend a stretch of class due to illness or quarantine, review the online recordings!!!**

If you miss class and need to complete the alternate worksheet, please contact me. Your deadline will not necessarily shift unless you can validate that you are unable to plan around the missed classes (so, if you're just out of class because your car is in the shop, keep up with the deadlines, but if you miss class because you have a bad concussion and can't be around bright lights for a couple weeks, then please tell me so that I can shift your due dates...that one happens a lot!). In the event that an absence occurs during one of the scheduled exams, **YOU MUST CONTACT ME IMMEDIATELY!** Not all absences will be honored for potential make-up exams. **I will notify the registrar that you have stopped attending should you fail to complete 3 assignments in a row, unless I have been notified about extenuating circumstances.**

### **Accommodations:**

In compliance with the Americans with Disabilities Act (ADA), I will make every effort to honor requests for reasonable accommodations made by individuals with disabilities. If you have a disability and require accommodations, please register with the Disability and Assistive Technology Center (6<sup>th</sup> floor Learning Resource Center in the Library) and *let me know as soon as possible*. Requests for accommodations, including university-sanctioned extra-curricular event conflicts, can be responded to most effectively if I receive the requests early. Examples of accommodations include alternate quiz times, scheduling an adjacent room with proctor for quieter test-taking, use of ear plugs, worksheet make-ups, etceteras. Such requests are confidential. More information about the ADA at UWSP can be found under this subsection of the human resources webpage at <https://www.uwsp.edu/hr/Pages/Affirmative%20Action/ADA.aspx>.

### **UWSP Community Bill of Rights and Responsibilities:**

UWSP values a safe, honest, respectful, and inviting learning environment. A set of expectations for students and instructors, known as Student Rights and Responsibilities, is intended to help establish a positive living and learning environment. For more information go to the webpage for the Dean of Students, which outlines expectations for a respectful learning environment, as well as the an overview on school policies regarding academic misconduct. The *minimum* penalty for violating this policy is a recorded zero for the assignment in question (or negative points in case of worksheets). The Dean of Students webpage is found at: <https://www.uwsp.edu/dos/Pages/default.aspx>.

In addition to these standard words on rights and responsibilities, it is prudent to formally discuss class conduct. Specific topics in this class are of a sensitive nature. Please be conscientious of what you say and be respectful of each other. I want to maintain a comfortable learning environment, and also prepare you for appropriate conduct in your future health professions (certain conduct could get you kicked out of a graduate program, for instance). Some of the materials made available in lab have been willed to the university and should be treated with respect. Inappropriate conduct in this class and/or open lab will get you kicked out without re-entry until appropriate conduct is sincerely assured and provided in writing (the length of such writings will be dependent upon the extent of misconduct). Even if you move to an online format, I will NOT accept any of the work you hand in (digital or otherwise) until this correctional assignment is complete.

### **MASK NON-COMPLIANCE IS INCLUDED AS THIS MISCONDUCT. DO NOT TEST ME ON THIS POLICY!**

Additional food-for-thought: if you use an electronic device for supplemental study, it is prudent to use terminology “as scientific as possible” when conducting searches (your search may still return more than you bargained for). This point is also a good reminder that certain topics that you study maybe shouldn't be reviewed in public areas...most passers-by at a local coffee shop do not want to see cadaver images. Finally, any images taken in lab of the various materials *may* be subject to copyright (in other words, think before you post, or better yet, don't post at all).