Purpose
The purpose of this laboratory course is to give you hands on experience with the study of tissues, bones and muscles of the human body. Internal organs are studied on the cadaver and cat demos.

Learning Outcomes- Upon completion of the course, you will be able to:
1. Use a repertoire of anatomical terminology with accuracy
2. Describe with detail the anatomy of specific body systems at both the cellular and organ level.

Required Materials
- Text from lecture. Bring to all labs.
- Required Text BIO 4 Human Anatomy Manual for Cabrillo College by McFarland and Hoffman. Available at the Cabrillo Bookstore

Dissection Lab:
- Gloves for all dissection labs. We do not ever provide these.
- Scalpel blades, size 22. Do not buy the scalpsels with the handles. JUST BRING THE BLADES. We provide the handles.
- Closed toed shoes. Hair ties if you have long hair.
- Lab coat that buttons in the front for dissections labs. NO PULL OVER THE HEAD protective clothing. We do not provide lab coats. If you do not have protective wear or closed shoes, you may not stay in the lab.

Helpful Non-required books
- The Anatomy Coloring Book. This book will help you if you like to color and if you are a visual learner.
- Realism, A Study in Human Structural Anatomy by C.E. Edwards and B. Grosenick
- A Photographic Atlas for the Anatomy and Physiology Laboratory by Kent Van de Graf
I will bring these texts, along with, flashcards to the first several classes so you can view them

Laboratory Exercise Format
The time in lab is time for you to work on memorizing a large volume of names of structures. Three hours a week is not enough for you to be successful at doing so. Friday open labs (1:00-5:00) are the best time to revisit the lab. I encourage you to visit these whenever you can.

The other lab periods you MAY visit are those other sections associated to the same lecture. If you need to visit another lab, GET PERMISSION VIA E-MAIL FIRST. You may need to come in after the first hour is over. Seats are the priority of the student enrolled in that lab. Please be courteous, our labs are very full.

Missed labs
Missing a lab will put you significantly behind. Leaving lab early will put you behind. Please use your time wisely in order to keep up with the material. It is your responsibility to make up a lab. If it is a holiday on the day of your lab, you must make it up on your own time.
Bio 4A

This is a separate class that can be concurrently taken with Anatomy to acquire one extra unit. To satisfy the Bio 4A requirement, you need to document 3 EXTRA hours per week of anatomy lab. This means you must come for 35 extra hours in the semester. The way to fulfill these hours is to attend:

- Friday Open Lab in Rm. 623 on Friday afternoons  (Total of 42 hours offered)

If this time does not fit into your schedule, then consider yourself not eligible to take this extra unit. You will need to document your hours. This will be the proof that you fulfilled the requirements. Keep track of your hours on your personal sheet. This sheet will be handed in at the end of the semester. You will also need to write an essay, to be handed in on the day of the last practical exam. I do not encourage enrolling in this class unless the extra unit is imperative to you.

Students With Disabilities All students needing accommodations should inform the instructor ASAP. Veterans may qualify for accommodations. Wounded Warriors may have acquired injuries which through the American with Disabilities Act(ADA) entitles the use of accommodations to ensure equal opportunity for students with verified disabilities. To determine if you qualify or need assistance with an accommodation, please contact Disabled Student Services, Room 810 479-6379, or the Learning Skills Program, Room 1073, 479-6220.

Tutoring- Make use of this excellent service available to you! It’s free. It’s helpful.
1. Anatomy tutor available every Friday 12:30-4:00 Room 623 Open and free to all students
2. Individual tutoring available through Tutorials. Call 479-6470 Free to pre-health occupations students with instructor’s recommendation.

Evaluation
You will not receive a letter grade for Anatomy lab. Rather, your grade for the lab will make up 30% of your overall grade for Bio4. Your lab grade will be based on a set of tissue drawings, homework, quizzes, and 3 lab tests.

Grades and Evaluation
Not all exercises are of equal weight. Each item will be weighted as follows:
- Tissue drawings 20 point
- Lab quizzes 25 points approximately
- Muscle Actions 10 points
- 3 Lab exams 300 points
- Participation points varies (some activities may earn 5 points)

The final lab grade will be combined with your lecture scores and weighted as 30% of your final grade. Please keep all work that has been graded and returned to you. If there is any question regarding the grade on a returned assignment or test, you will want to refer back to the original work.

Tissue Drawings
During the semester you will study tissues and you will be make drawings to hand in. A total of eleven drawings need to be turned in on week 13, or May 9. Late drawings lose 1 point per day.

Format of Tests
Lab Exams
Lab exams are practical tests with specimens located on the tables for identification. In order to avoid long waiting periods, you take the practical in shifts. On the week before your exam, you will need to sign up for the first or second shift. The sign up sheets will be posted on the board. Make-ups are only allowed during that week of the exam. If you miss the whole week NO LAB MAKE-UP IS AVAILABLE. Taking photos of our cadavers or dissected cats is strictly forbidden. Show respect of the people that donated their bodies for you to learn. You need to devise other study methods for exams.
**Bone test**
Stations are made up of a bone or bones with three to four structures to be identified. There will be 50 questions in all, 2 points each. Total points on test: 100. You will sign up for one of two shifts for this test that takes about an hour. Slides will be set on the scope for your identification. You may be asked to come back for the last hour of lab after the second shift is finished.

**Muscle test**
Cadaver: You will stand around the cadaver and an instructor or TA will point to the muscle that needs identification. Once everyone has written the answer, the next muscle is shown to you. Origins and insertions are tested at this time too. You need to sign up for one of two shifts each taking one hour. Total questions: 50.

**Organs & Vessels**
You will be tested on vessels and internal organs directly on the cat or cadaver. The internal organs will be tested mostly on the cadaver. Urogenital may also be tested on the cat if the dissections are not adequate on the cadaver. Eye, ear and heart shall be set on stations with pins, labeled for identification. There will be four tissues slides, too.

**Quizzes**
On lab days in which we do not have a lab test, there will be a 3 – 5 point quiz. Quizzes include questions from the day of the lab or the previous week.
Often there will be extra credit questions pertaining to information not directly covered in the lab manual. If you take the time to answer them correctly, they will be counted as extra credit. There will not be any quiz make ups.

**Tips for success**
This class cruises along at a very fast pace. DO NOT GET LEFT BEHIND. Before lab, you should have reviewed the terms that you are to identify and learn for that class. Look them up in your text and get an idea of what we are talking about. Use many sources for your studying. Use your text as a reference source. You will find the illustrations are spectacular. Use flash cards if they help you. Mostly, lab should not be the first time you hear the word for the structure you are to recall. If you have no idea whether the xiphoid process is a muscle or a bone or a mathematical equation, it will be harder to remember. Your introduction to the terms should be at home. Form study groups. Quiz each other. Be sure to take the practice tests prior to the actual test. Help your neighbor. Note that the class is graded strictly on percentage not on a curve. Another individual’s grade does not affect yours. Thus, teaching is a great way to review the material and to make sure you understand it, too.