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 through the dissection of cats.

What is expected that you learn from this class
Learner Outcomes: In this course, you will learn 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.

At the end of the semester, you should be able to do the following:
• recognize and name the major muscle groups of the human body
• point out and name bone structures that relate to muscular origin and insertion
• identify and name the major blood vessels and organs of the cat
• perform simple anatomical dissection
Required Materials
- Human Anatomy Lab Manual
- Text from lecture
  Always bring to lab for reference
For dissection labs:
- Gloves for all dissection labs. We do not provide these.
- Scalpel blades, size 22. Do not buy the scalpels with handles. Bring only the blades – we provide the handles.
- Closed shoes for dissection labs, lab coat, old shirt, any protective clothing.
- Pencil or pen covered in a glove or designated for anatomy ONLY.

Cell Phones and Cameras
No cell phone use of any kind is allowed and absolutely no photos can be taken.

Laboratory exercise format
Lab time is 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 are a good time to revisit the lab. The other lab periods you may visit are those sections associated with 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
It is your responsibility to make up a missed lab; this includes holidays.

Biology 4A: Human Anatomy Coordinated Studies
You may earn one unit of credit if you enroll in Biol. 4A. The course requires 3 hours of work per week and expands on the subject area in anatomy through dissection laboratory or self-directed lab assignments. 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 Room 623 (total of 42 hours offered)

There are no exams; it is graded on a pass/no pass basis. Transfer credit is given at CSU.

Accommodations for disabled Students
Accommodations are provided to ensure equal opportunity for students with verified disabilities. If you need accommodation, please see me during an office hour and contact staff in:
- Disabled Student Services & Programs (DSP&S): 479-6379, Room 810
- Learning Skills Program (LSP - for students with learning disabilities & attention deficit disorder): 479-6220, Room 1073, Learning Resources

Grading:
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 Biology 4. Your lab grade will be based on the following:
- Tissue drawings 20 points
- Muscle actions 5 points
- Lab quizzes + 20 points
- 3 lab exams 300 points

The final lab grade will then 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 two weeks of tissue labs you will be making drawings to hand in. A total of eleven drawings need to be turned in on the day of the tissue test. Late drawings lose 1 point per day.

**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 MAKEUP IS AVAILABLE. Taking photos of our cadavers or dissected cats is strictly forbidden. You need to devise other study methods for exams.

**Tips for success**
This class cruises along at a very fast pace - DO NOT GET 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. 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. For example, 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.

**Resources for Biology 4 Lab**
Office hours are listed on page 1 of the syllabus. Please make a point to meet with me within the first three weeks of class to introduce yourself and discuss any concerns or ideas you have.

**Tutorial Center** – free tutoring is available in Room 1080A. Phone: 479-6470. Space fills quickly so sign up early.

**MESA** – Mathematics, Engineering and Science Achievement – room 714, ph 479-6503. Check www.cabrillo.edu/services/mesa for hours.

**Human cadaver tape** is on reserve at the library.

**Friday Open Lab** – an anatomy tutor is available for review of lab materials on Friday afternoons in Room 623.

**Helpful non-required book suggestions**
- A Photographic Atlas for the Anatomy and Physiology Laboratory by Kent Van de Graff
- The Anatomy Coloring Book
- A Visual Analogy Guide to Human Anatomy

**Helpful websites for lab:**
http://www.bio.psu.edu/people/faculty/strauss/anatomy/biology29.htm
http://www.getbodysmart.com/
### BIOLOGY 4 HUMAN ANATOMY LABORATORY SCHEDULE

**Spring 2013**

Robin McFarland  
Carol Hoffman  
Pam D’Arcey  
Matt Halter  
Sharron Barth

#### Laboratory Schedule

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<tr>
<th>Week</th>
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| Week 1| Feb 11-15   | Introduction to Anatomy Lab  
Comparison between humans and other mammals  
Introduction to Terminology |
| Week 2| Feb 18-22   | Skull  
Vertebral Column  
Histology of bone, cartilage & blood |
|        | MONDAY HOLIDAY |                                                                         |
| Week 3| Feb 25-Mar 1| Skeleton: Upper Limb, skull review                                     |
| Week 4| Mar 4 -Mar 8| Lower limb                                                             |
| Week 5| Mar 11- Mar 15| Review: Vertebral column, skull, upper and lower appendicular skeleton and Histology. Practice tests. |
| Week 6| Mar 18-22   | EXAM 1: Comparative anatomy, skeletal features (100 pts.)             |
| Week 7| Mar 25-29   | Muscles of the cadaver  
Histology: Muscle tissue                                               |
| Week 8| April 1-5   | SPRING BREAK                                                           |
| Week 9| April 8-12  | Muscles of the cadaver  
Histology: Adipose tissue                                              |
| Week 10| April 15-19 | Muscles of the cadaver                                                 |
| Week 11| April 22-April 26| EXAM 2 Muscles (100 pts)                                              |
| Week 12| April 29-May 3| Sheep brain dissection  
Human Brain  
Histology: Nervous tissue and epithelial tissues  
Introduction to vessels |
| Week 13| May 6-10  | Ear/ Eye. Internal Organs of cat and human. Vessels continued.         |
| Week 14| May 13-17  | Sheep heart dissection and human heart viewing  
Urogenital system                                                      |
| Week 15| May 20-24  | Urogenital continued  
Review cat and human internal organs, brain and heart                  |
|        | MONDAY HOLIDAY |                                                                         |
| Week 16| May 27-May 31| EXAM 3: Sheep heart, vessels, internal organs, brain (100 pts.)     |
| FINALS WEEK | 6/3-6/7 | Finals week  
NO LAB                                                        |