

### **Background and General Instructions**

Presentations will be given in lab the week of 2/6 and will be graded as homework 2 and ica 4. Your GTA will assign each lab group a combination of joint, muscle group(s), and injury/ailment from the table below during the second laboratory period. On your own and with your group over the course of the second and third labs, you will investigate and answer the questions listed below. Your presentation will comprise the answers to those questions and the additional information indicated. Each member of the group must present answers to at least one question to receive full credit. Unless circumstances warrant it, all group members will receive the same homework grade for the presentation.

Presentations should last about 10 minutes and time will be provided for the other students to ask questions. You should plan to use the skeletons and posters provided in the lab as visual aids; if you wish to bring in additional illustrations, be sure they will be visible to the entire class.

### **Grading**

The “homework” portion of the grade for the presentation will be assigned to the entire group based on the accuracy and thoroughness of the information presented; point values for each portion of the presentation are indicated below. The “ica” portion of the grade for each individual will be assigned based on the quality of his/her individual presentation. Points will be deducted for students who simply read their presentations and who use technical terms they can't pronounce and don't define or describe.

### **Timeline etc.**

You should be able to complete most of the work on the presentations during the second and third lab periods after completing your lab work. During the second lab period, you should use the resources provided in the lab to identify the joints/muscles you've been assigned and answer as many of the questions as thoroughly as you can. Based on those efforts, determine what information you still need to find and assign topics for each student to research. Before leaving lab, you will be required to provide that list of names and topics to the GTA. Your homework assignment will be to bring hard copies of articles/web pages needed to complete the work to the third lab period.

During the third lab, you should review the information everyone has brought in, complete answers to the questions, and, ideally, practice the presentation (or at least develop a detailed plan). You should have your GTA review your answers to be sure you have addressed all items completely and accurately. Before leaving the lab, give the GTA a final detailed list of each individual's assigned responsibilities. This protects all group members in the event that one member either doesn't complete his/her assignment or must be absent the day of the presentation.

### Topics and Information/Questions

Joint	Muscles	Injury/ailment
elbow	biceps, triceps	tennis elbow, golfer's elbow
knee	quadriceps, hamstrings	ACL injury
hip	thigh adductors, thigh abductors	osteoarthritis/hip replacement
wrist	forearm flexors, extensors (groups only, not individual muscles)	carpal tunnel syndrome
shoulder	deltoids, pectorals	rotator cuff injury
intervertebral joints of lower back	abdominals (know the individual muscles), erector spinae	herniated disk

1. Name the joint your group studied. Is it a hinge, pivot, or ball-and-socket joint? Use the skeletons and/or your own body/bodies to illustrate the general actions of the joint. Using the skeletons, show and correctly identify the bones involved in the joint. (2 points)
2. Name the muscles you've been assigned that are involved in the joint. On the skeletons, demonstrate where each of the muscles attach. Using the skeletons and/or your own body/bodies, illustrate and correctly identify the action(s) of each of the muscles. Be sure to include all major actions (most muscles have more than 1). (2 points)
3. Name and describe the injury/ailment your group researched. What specific structure(s) is/are damaged and how does the damage occur (i.e., what specific kinds of activities or other phenomena cause the problem)? Include names and descriptions of accessory structures (e.g., tendons and ligaments) as appropriate. What are the symptoms of the injury/ailment? (3 points)
4. How is the injury/ailment treated? In most instances, the injuries/ailments can vary from mild to severe, so be sure to include the range of treatments appropriate to varying severities. Where can students find out more about the injury/ailment? (3 points)