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Office hours: Dr. Jayne by appointment
Textbook: Plowman, S.A. & D.L. Smith. 2002. Exercise Physiology. Benjamin Cummings

All of the syllabus and lecture topics are tentative and subject to change as necessary. Because this is the only the second time this course has been offered, one should expect substantial mid-course adjustments.

DATE	TOPIC
1/3	Course organization, policy, goals and introduction; scaling of height and weight introduction to using spreadsheets for data analysis
1/5	Power Lab tutorial and pulse
1/10	Blood pressure Mini-presentations 1-6
1/12	Electrocardiograms
1/17	Electromyograms and grip force fatigue Mini-presentations 7-12
1/19	Electromyograms and lever arms
1/24	Electromyograms and movement Mini-presentations 13-18
1/26	Electromyograms and movement continued
1/31	Oxygen consumption and carbon dioxide production
2/2	Catch up day & preliminary experiments for group projects
2/7	Preliminary group research proposals due
2/9	Group research project finalized and begin data collection
2/14	Student designed group research project
2/16	Student designed group research project
2/21	Student designed group research project
2/23	Student designed group research project
2/28	Student designed group research project
3/2	Student designed group research project
3/3	Individual papers due
3/7	Student designed group research project
3/9	Student designed group research project
3/10	Group research project written report due
3/16	Group oral presentations

Course policy

Grading Policy:

Attendance at class is mandatory. Many experiments will be conducted and written up within the scheduled class time. Anyone who is absent without an approved excuse will receive zeroes for all associated work. Missing three labs without an approved excuse will result in a failing grade for the class. In advance of each class, materials to prepare for the lab exercise will be posted on the Blackboard site. Students should read this before class and bring a copy to class. Be prepared and it will pay off. I strongly encourage students to use the entire 3 hour lab period effectively. If you have completed material for a unit, then it is fine to leave early after checking with the instructor. All students will be required to serve as experimental subjects and to operate the physiological equipment required to make measurements. Any student refusing to serve as an experimental subject will not be able to pass the course. All students will be required to make oral mini-presentations using PowerPoint.

Mini presentations will be prepared by a lab group but presented orally by only one student from the group. All presentations will be made using PowerPoint, and the total length of the presentation including time for questions must not exceed 10 minutes. No more than one slide per minute of the presentation is a good guideline. I recommend not more than 7 slides so that the talk will be 7 minutes, and 3 minutes are available for answering questions. Although the mini-presentation can be prepared by an entire lab group, the grade for the presentation will be given only to the person that made the presentation.

Topics and dates for mini-presentations will be available on a separate handout.

Quizzes may be made available in Blackboard. These quizzes will be open-book, but students must take the quizzes independently. Any students not working independently on the quizzes will receive a failing grade for the entire course.

Pop quizzes may be given at any time during the class on material that students should have read in preparation for the laboratory exercise.

Mini-lab reports will mostly be completed in class by each laboratory group. On each min- lab report one individual should be designated as first author and should serve as the leader for the project. The first author of the mini-lab report will receive twice the value for the assignment as all other members of the lab group. Each member of the lab group must be first author at least once during the quarter.

Individuals papers must be typed, double spaced, with one-inch margins, font size of 10-12 point and not exceed 10 pages (excluding references). The papers should be in the format of the Journal of Experimental Biology. Papers should summarize the results of one week of monitoring your intake of food, alcohol and tobacco, time spent sleeping, sitting, walking, number of flights of stairs and duration of strenuous activity. Besides using these data to calculate an energetic budget, you should critically evaluate the consequences of your current lifestyle for your physical fitness. Determine your BMI and discuss its potential relevance to these issues. You should also indicate your strategy for improving your fitness if necessary, and if you do not feel this is necessary, then you should justify why not.

Group project results will be summarized in an oral presentation during finals week. The oral presentation including time for questions should not exceed 20 minutes. The written reports should follow the same style guidelines as for the individual paper. The length of the text (excluding references, tables, figures and figure captions) should not exceed 10 pages. The written report should also include an appendix with brief summary of the division of labor within the group (for example who took the primary role in performing statistics, writing certain sections, etc.). Students may receive early approval of their group projects, and I encourage students to begin brainstorming immediately on what they would like to do for their experiments. Group projects must integrate multiple experimental techniques (monitor pulse, blood pressure, ecg, emg, ergometry, ventilation, gas exchange, kinematics). Final approval of a project will require some preliminary data and a time line to ensure the logistical feasibility of the proposed experiments.

EVALUATION:

Combined value of mini-presentations, quizzes and mini lab reports	50%
Individual paper	20%
Group project oral presentation	5%
Group project written report	20%
Subjective evaluation of class participation and cooperation	5%

EQUIPMENT, SAFETY & USE OF COMPUTERS IN THE LAB

All students will work in groups (maximum of three) and each group will be permanently assigned to a particular workstation (number 1-6). Rules and procedures detailed in the separate handout on this topic must be adhered to strictly or your grade may be penalized. **Let's all work together to stay safe and keep the equipment in good repair!**

Academic integrity: The University Rules, including the Student Code of Conduct, and other documented policies of the department, college, and university related to academic integrity will be enforced. Any violation of these regulations, including acts of plagiarism or cheating, will be dealt with on an individual basis according to the severity of the misconduct.

Special needs: If you have any special needs related to your participation in this course, including identified visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability that may influence your performance in this course, you should meet with the instructor to arrange for reasonable provisions to ensure an equitable opportunity to meet all the requirements of this course. At the discretion of the instructor, some accommodations may require prior approval by Disability Services.