

KINE 439W
EXERCISE EVALUATION AND PRESCRIPTION
GUIDELINES FOR PREPARING LABORATORY REPORTS

I. General format: All lab reports should be typed 1 ½- or double-spaced with 1" margins.

A. COVER PAGE: Should include class name/number/laboratory # and title of lab exercise. **List all lab group members** under your name on a cover page; make sure I can tell who is the writer of this report (your name in caps, e.g.) *I will not grade a report missing this cover page.*

B. Introduction [label each of these sections with these sub-headings] : one-two paragraphs describing purpose/goals of the laboratory exercise, major activities [e.g., " blood pressure measurements were obtained on two subjects and serum cholesterol determined on one subject"], and why/how these skills might be useful to the exercise professional.

C. Methods: one, at most two, paragraphs on methods. You won't have room for many details, but you DO want to specify what was done to how many subjects under what conditions to collect your data. Specify important factors that were, and were not, controlled for (e.g., "supine blood pressure was measured after 10 minutes in the supine position, but no standardization of previous caffeine intake was specified").

D. Results: *The primary purpose of these lab reports is for you to gain more experience in data manipulation, clear presentation of results, and, most importantly, in discussing those results. A few tips:*

1. Include in your report all your raw data. This may include test worksheets, ECG strips, or other lists of data. If there is only one ECG strip for 4 of you, get xerox copies: your lab report must stand on its own, with all data included. Do not refer the instructor to Sally's report for the resting ECG: what if she forgot to include it??? **Include a sample of all calculations performed**, no need to show every calculation.

2. Briefly discuss results in your tables and/or graphs, embedded on the same page with those data. [Aside on arcane grammar point: "data" is plural, singular is "datum". So it's "those data" not "that data".] As with any experiment, you should first try to evaluate your results as compared to past results (or normative values): are these blood pressure measurements realistic for a 20-year-old at rest? during exercise? are these heart rate responses within normal range? [Note that you may have to do a touch of research to find these values.] *Always state what you're comparing your results to;* this is a good place to cite a reference. Secondly, evaluate the internal consistency of your results: e.g., why was Sally's resting BP 110/75 mm Hg the first time you checked, and then 130/80 mm Hg at rest, but right before her treadmill test? *Look at your data critically and make comments to account for apparent discrepancies from what you expected to get.* Sometimes we learn more from those unexpected results than from those that fit perfectly into "normal" range. *Do not waste your (or your reader's) time by reiterating in text the information presented in your tables/graphs: summarize/analyze/critique it.*

3. Tables/graphs: All graphs must generated with graphics software; multiple PC's (e.g. EXCEL--spreadsheet + simple graphing capability) are available in the computer lab in 150 Read Bldg. You will need to be able to generate line graphs (connect-the-data-

points type and line-of-best-fit types) and bar graphs. Some lab reports requires inclusion of standard deviation error bars; see one of your instructors if you need help figuring out how to add these to your graphs.

Tips for graphs:

1. carefully label both axes with variable name *and its units*
2. if demonstrating a relationship (e.g., time on treadmill test vs. VO_{2max} , draw a "line of best fit" to match your x-y data points; ideally, this is accomplished by using first making a scatter plot and then activating the linear regression option to superimpose a calculated "line of best fit".
3. if you have multiple lines or bars, label each one with a short acronym or use a legend box to define patterns or symbols
4. prepare a short caption at bottom of each graph defining briefly the point of the graph plus all acronyms; each table/graph should be numbered and have a title—number tables and graphs independently (you may have Tables 1 and 2, and Graphs 1-4)

E. Discussion of assigned questions: Answer all questions in each lab handout carefully. This is another good place to cite textbooks or published articles to support your answers. Please number your answers with the same numbers as on questions. **This section is where most students lose the most points;** concentrating your efforts on this section will pay off.

F. Reference list (=citations referred to in your text): ***No references will be required on first laboratory report, but will be on reports 2-3.*** Detailed information will be handed out well before the second laboratory report is due.

II. Policy on individual vs. group work on lab reports: You are ***required*** to work with your entire lab group in generating the data and assuring that everyone has all the data required to produce his/her lab report. Do ***not*** penalize your lab mates by providing your personal data (if required) only the night before a lab report is due: make all required data available to lab mates ASAP after data collection is complete! You are encouraged to work together on data analysis, generation of spread sheets, and finding appropriate references to cite. However, if you allocate jobs like this among your group (i.e., if anyone else in your lab group contributed to data analysis, spreadsheet or reference location that appears in your lab report), you ***must*** submit on your cover sheet who did what work of this sort within your lab group. ***Lab reports will be returned with a score of zero if identical graphs or references are found within more than one report from one lab group without acknowledgement on the cover page of who did what tasks. If identical or virtually identical text is found in more than one lab report, a score of zero will also result, with a risk of academic dishonesty charges as well.*** Make sure by the end of the semester you have contributed to and are competent in all types of required tasks. You may discuss with lab mates how you will answer questions about each lab; however, the ***writing*** of your lab report must be done by you and you alone! If you have any doubts about this policy, contact the instructor for clarification. Lab reports with sections of *identical text* are subject to a grade of F *and disciplinary action*.

As always, problems arise when one lab group member is not pulling his/her own weight or not delivering part of the group data in time for lab mates to write their own reports. Notify your instructor by email or private conversation if this is a problem with your lab group.

- III. Grading:** Excellent (100%)
 Competent, some weaknesses (90%)
 Adequate (just), multiple weaknesses (80%)
 Unsatisfactory (60%)

Do not expect to achieve the "excellent" or even "competent" grade if you do not adhere to the guidelines stated above. Labs graded as unsatisfactory can be redone and turned in for an 80% score, *if* returned to the instructor within one week of its receipt by the student with all major deficiencies corrected; *clip the first, original version to the new one*. Late reports may be accepted up to 24 hours late, with a 20% deduction on points earned; check with the instructor **first**.

Are your writing skills graded?? Absolutely, **yes**: 439 is now a writing-intensive course, and as such your writing mechanics will be graded. Included will be proper usage (grammar, punctuation), clarity of writing, logical flow, spelling, table/graph construction, and appropriate inclusion of paraphrased information from the research literature. Is grammar or spelling your weak point? First suggestion: proofread, or (better) have a speller-whiz friend proofread, or use SpellCheck (but do *not* rely solely on the latter!). Second: Look into buying (and *using*) a dictionary and (for grammar) the ultimate reference: Strunk & White's *The Elements of Style*, all of 85 pages long. Also M. Shertzer's *The Elements of Grammar* is good, especially for when to use a comma, semi-colon, what's a run-on sentence, etc. Another excellent resource is the University Writing Center website, with hundreds of links to great information: <http://writingcenter.tamu.edu>.

V. Any remaining confusions? See Dr. Bloomfield before or after class or call 862-1181; we can make an appointment to speak in person, if you prefer. I will strive to answer questions sent by email within 12 hours of receipt.

Contact information:

Instructor Dr. Sue Bloomfield, Professor
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Phone 862-1181
E-mail sbloom@tamu.edu
Office hours Tues 10-11 am, Fri 10:30-11:30 am OR by appointment (schedule is variable)
 NOTE: out of town Sept 10-15, Sept 25, Oct 8-9, Oct 28

sb: 9/04/09