Enrollment Note: You cannot be enrolled in Psyc 480 without also being enrolled in Psyc 480L and vice versa. Psyc 225/225L or equivalent and Math 130 or equivalent are prerequisites for this course.

Website / Textbook: There is a website to support this course. DO NOT go to Moodle. Go to wv2.coastal.edu/kingw and click on the link to Psyc 480. There is no required textbook for this course. Several online textbooks are listed at the website. Other material will be handed out in class and posted at the website as needed.

Attendance Policy: I take attendance every day that I remember to do so, because I am required to. There are no points or penalties for (non)attendance (other than missing my brilliant lectures). Since there is no textbook, the only way to get the material is to be here and take notes!

Office and Office Hours: My office is Smith Bldg. 217-I. My office hours this semester are MWF 10:00-10:50, W 2:00-2:45, and TTh 10:45-11:45. I am not easy to reach by phone, and I will not return your call. My e-mail address is kingw(at)coastal(dot)edu. Appropriate topics for e-mails include questions with simple answers that can be asked and answered briefly and that you cannot look up the answers to for yourself, for example by referring to this syllabus or the website.

Note About E-mail: Please be aware that, due to a new "security" measure that ITS has implemented, I can no longer receive e-mails or phone messages when I am not in my office. Therefore, once I leave campus for the day, I will be unable to answer your e-mails until the following morning. Phone messages can be especially problematic. E-mail is preferred.

Background: This is a second statistics course. It is assumed that you covered (and remember!) the following topics from your first statistics course: variables (independent and dependent), categorical (nominal), ranking (ordinal), and numeric (interval and ratio) levels of measurement, measures of center or central tendency (mean and median), what variability is and how to quantify it (sum of squares, variance, standard deviation, interquartile range), standardization (z-scores), confidence intervals, basic hypothesis testing, null vs. alternative hypotheses, Type I and Type II error, t-tests, simple analysis of variance, correlation, simple linear regression, chi-square tests (especially the test of independence), line graphs, bar graphs, histograms, box plots, scatter plots. You should also know a little basic experimental design: simple vs. factorial designs, between vs. within subjects, matched groups vs. repeated measures, true vs. quasi-experiment, what confounds are and how to control for them. If any of this sounds hazy or unfamiliar, check the website for review materials.

Calculator and Software: It will be necessary to have a good scientific calculator, which you should bring to class every day. It does not have to be a graphing calculator, although that could be helpful at times. Don't ask me how to use it. Read the manual. (You can get it online if you've lost yours.) Don't go out and spend a lot of money on one if you don't already have one. You will also want to have access to statistical software called R. It is installed on all the computers in Kimbel Library and Bryan Information Commons, Wall 204, and Kearns 113. Go to www.r-project.org to get a free copy to install on your own computer. It won't work on a tablet or Chromebook, but there is a workaround. You can also install a Windows version of R on a flash drive, which you can then use on any Windows computer. Ask me. I am not going to require you to learn to use R. I will use it in class, especially for graphics, and if you want to learn it, I will help you as much as possible.
**Topics to be Covered in This Course:** The main emphasis of this course will be on looking at data and learning to see relationships between variables. Each of the following methodologies will be covered: data summarization; relationships between a grouping variable (IV) and a numeric response (DV), including t-tests, simple and factorial ANOVA, and nonparametric methods; relationships between numeric variables (correlation and regression and more advanced techniques based on those, such as mediation and path analysis, if time permits). Typically, about half of the semester is devoted to regression topics and half to grouped data (t-tests, ANOVA), although I make no promises about that at this time. Special attention will be paid to unbalanced factorial designs, which are common in the social sciences. We will also look briefly at randomization and bootstrapping methods if time permits.

**Grading:** Grading will be based on a series of exams given in lab throughout the semester. I anticipate five exams, but it could be more or less. Exams will always be announced in advance. The exams will consist of a combination of computational and conceptual questions. You may use your notes while taking these exams, EXCEPT FOR THE FIRST ONE. You will need to use some sort of computational device, either a calculator or a computer with your preferred software (R, SPSS, Excel, whatever floats your statistical boat) installed. I will discuss more in detail the nature of these exams as the first one approaches. Final grades will be based on a 90% A, 80% B, 70% C, 60% D scale, with the upper half of those intervals being the plus grades. IF any extra credit is given, it will consist of exercises that MUST be done in class and CANNOT be made up. Such exercises will not be announced in advance.

**Dates to Remember:** You may want to make note of the following dates.
- Monday, January 20th -- Martin Luther King Jr. Day holiday (no classes)
- Monday-Friday, March 9th-13th -- Spring Break (no classes)
- Wednesday/Thursday, March 18/19th -- Advanced Registration for Seniors (Apr 1/2nd Juniors)
- Wednesday, March 25th -- last day to drop with a W
- Friday, April 10th -- last day to apply for Dec 2020 graduation (application to dean)
- Friday, April 10th -- Student Holiday (no classes) (very Good Friday)
- Wednesday, April 29th -- last day of classes this semester
- Tuesday, May 5th at 11:00 AM -- Final Exam (regular classroom)

**Notice to Seniors:** If you are planning to graduate next May, you must file an application to graduate this semester. Please look at your program evaluation before submitting your graduation application online. If it does not say Pending Anticipated Complete at the top, your application will not be approved. See your adviser. If it does say that, you should be good to go. Last date for applying is Friday, April 10th (to the dean). If you miss this deadline, the application fee is doubled. It would be best if you applied immediately after you preregister. Waiting until the last minute is a bad idea!