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 ww2.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! If you miss a class for any reason, don't ask me to repeat what I said. If you miss a class, I do not need to know why.

Office and Office Hours: My office is Smith Bldg. 217-I. My office hours this semester are MWF 10:00-10:45, W 2:00-2:45, and TTh 11:00-11:45. 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. I'll answer questions about the R software by e-mail. If you're working outside of class and get an error message, I can get you straightened out IF you copy and paste the command you used AND the error message you got.

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.

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 help if you have a good scientific calculator, especially if you want to follow along with calculations I do in class. 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. It's not required. 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 will discuss installing R in class.
**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. We will also look briefly at randomization and bootstrapping methods.

**Grading:** Grading will be based on "lab" exercises that I hand out in class during the Tuesday lecture. These exercises will be due no later than the beginning of class on the following Thursday. (DO NOT e-mail them to me. Hard copies only please!) You may ask each other for assistance on these exercises. HOWEVER, you may NOT share or copy answers. ANY hint of that will result in a stern look and both parties receiving a 0 for that exercise. There will be 15 of these exercises, including one handed out on the last day of class that will be due during the final exam period. In addition to these "lab" exercises, there will be an in-class exercise to be completed during the final exam period. The nature of this "final exam" will be discussed in more detail in class as the end of the semester approaches.

**Dates to Remember:** You may want to make note of the following dates.
- Monday, January 21st -- Martin Luther King Jr. Day holiday (no classes)
- Monday-Friday, March 11th-15th -- Spring Break
- Wednesday/Thursday, March 20/21st -- Advanced Registration for Seniors (Apr 3/4th Juniors)
- Wednesday, March 27th -- last day to drop with a W
- Friday, April 12th -- last day to apply for Dec 2019 graduation (application to dean)
- Friday, April 19th -- Student Holiday (no classes) (very Good Friday)
- Wednesday, May 1st -- last day of classes this semester
- Tuesday, May 7th at 11:00 AM -- Final Exam for this class (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 12th (to the dean), and 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!

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**Course Objectives:** The goal of this course is to familiarize students with techniques used to analyze scientific data in the behavioral sciences. This course will prepare students to: 1) compute and interpret basic and advanced descriptive statistics; 2) compute and interpret basic and advanced inferential statistics; 3) display data and relationships between variables graphically.

**Student Learning Outcomes:** Upon completion of this course, students should be able to: 1) look at a dataset, determine what the explanatory and response variables are, determine if they are categorical or numerical, and propose a reasonable statistical analysis; 2) do a competent statistical analysis of the data; 3) see, analyze, and explain statistical relationships in categorical data: 4) see, analyze, and explain statistical relationships in numerical data.

**ADA Statement:** Coastal Carolina University is committed to equitable access and inclusion of individuals with disabilities in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Individuals seeking reasonable accommodations should contact Accessibility & Disability Services (843-349-2503 or https://www.coastal.edu/disabilityservices/).