## Additional Empirical Exercise 4.2

The data file **TeachingRatings** contains data on course evaluations, course characteristics, and professor characteristics for 463 courses at the University of Texas at Austin.[1] A detailed description is given in TeachingRatings_Description. One of the characteristics is an index of the professor's "beauty" as rated by a panel of six judges. In this exercise, you will investigate how course evaluations are related to the professor's beauty.

a. Construct a scatterplot of average course evaluations (*Course_Eval*) on the professor's beauty (*Beauty*). Does there appear to be a relationship between the variables?

b. Run a regression of average course evaluations (*Course_Eval*) on the professor's beauty (*Beauty*). What is the estimated intercept? What is the estimated slope? Explain why the estimated intercept is equal to the sample mean of *Course_Eval*. (*Hint:* What is the sample mean of *Beauty*?)

c. Professor Watson has an average value of *Beauty*, while Professor Stock's value of *Beauty* is one standard deviation above the average. Predict Professor Stock's and Professor Watson's course evaluations.

d. Comment on the size of the regression's slope. Is the estimated effect of *Beauty* on *Course_Eval* large or small? Explain what you mean by "large" and "small."

e. Does *Beauty* explain a large fraction of the variance in evaluations across courses? Explain.

[1] These data were provided by Professor Daniel Hamermesh of the University of Texas at Austin and were used in his paper with Amy Parker, "Beauty in the Classroom: Instructors' Pulchritude and Putative Pedagogical Productivity," *Economics of Education Review*, August 2005, 24(4): 369–376.