

**BUS 735: Business Decision Making and Research**

**Instructor: Dr. James Murray**

**Quiz: Univariate and Bivariate Statistics**

**Fall 2011**

The quiz uses the dataset `hourlyearning.sav` on the class website. This is real data on *average hourly earning* in the construction sector and professional services sector for each U.S. state in 2010. The region is a categorical variable for the region in the country for each state: South=1, East/Northeast=2, Midwest=3, West=4. Conduct the appropriate statistical analysis to answer the following questions. For each answer, state the null and alternative hypotheses, report the t-statistic and p-value, determine whether or not to reject the null hypothesis, and state your conclusion in plain English.

1. On average, do workers in professional services earn more per hour than construction workers?
2. On average, do workers in professional services earn different rates of pay in the East/Northeast compared to the South?
3. On average, do workers in construction earn different rates of pay in the Midwest compared to the South?
4. Is there statistical evidence that construction workers in the United States earn more than three times the federal minimum wage per hour (minimum wage is \$7.25)?