SPSS Handout – Confidence Intervals*

I have designed this document to assist you in producing confidence intervals about a sample mean.

Buttons that you click are given in **bold** font.
Variable names are given in *italic* font.

1. Open the SPSS program.
   a. Click **Start**.
   b. Choose Programs → SPSS for Windows → SPSS 11.x for Windows
      i. In the SPSS for Windows dialog box, click **Cancel**.

2. To calculate confidence intervals for a sample mean
   a. Click **Analyze**
      i. Choose Descriptive Statistics → Explore
      ii. Highlight the variable for which you want to construct a confidence interval
         1. Click the **right arrowhead** next to the “Dependent List” window to
            select that variable for analysis
      iii. Click **Statistics**
         1. Choose Descriptives
         2. Tell SPSS what confidence interval you want to use
            a. For example, if you wanted to find a 99% confidence interval,
               you would type “99” into the “Confidence Interval for Mean”
               window.
      iv. Click **Continue**
      v. Click **OK**
   b. The statistics** appear in the Output Window. What do these statistics tell you?

*Please note that SPSS (and most other statistical software packages) calculates confidence intervals using
the t-distribution (introduced in Chapter 8 on pages 295 – 297).

**SPSS gives you an estimate of the standard error. This is the standard deviation of the sample mean,
σ_\bar{x}. To find the “margin of error” for the 1-\alpha confidence interval, multiply σ_\bar{x} by the appropriate t-
statistic (i.e. t with n-1 degrees of freedom with area \alpha/2 in the upper tail)