**Research Methods I**

**HOMEWORK 4**

Due Oct 12, 2016

1. Type **all** of your answers including formulas and special symbols. Use the math equation function in Word to insert any/all special characters and symbols. Talk to your TA if you have questions about this.

2. Attach the SPSS outputs (stapled and with your name written on the first page). Organize the SPSS output in the order of the questions.

2. For all questions, use p=.05 .

3. Carry out your analyses as all statistical assumptions are met unless you were asked to test for a particular assumption.

4. Make sure to use APA format when reporting your results. You can use the APA example sheet posted on e-learning or your APA manual to for examples.

**Only give hand calculations when specified, otherwise complete all analyses using SPSS.**

1. A graduate BBS student wants to compare the number of hours graduate students do research one week before and after their deadlines. She predicts that the working hours are significantly different one week before/after their deadlines. In order to test this prediction, she has obtained samples of working hours of 7 doctoral students one week before and after their first year project deadline. Below are her data.

|  |  |  |
| --- | --- | --- |
| **Student #** | **Working hours (hours/week) before the deadline** | **Working hour (hours/week) after the deadline** |
| Student 1 | 35 | 10 |
| Student 2 | 22 | 11 |
| Student 3 | 31 | 9 |
| Student 4 | 19 | 13 |
| Student 5 | 29 | 15 |
| Student 6 | 19 | 20 |
| Student 7 | 26 | 22 |

State the results of your analysis in APA format:

Show the hand calculation (type it) for the effect size (make sure to include equation):

2. The researcher in question 2 now wants to compare the study hours of graduate and undergraduate students the night before their exams. She predicts that the graduate students study significantly more than undergraduates because they are “grads”! In order to test this prediction, she asked seven grads and undergrads how many hours they usually study on the night before their finals.

|  |  |
| --- | --- |
| **Undergrads** | **Grads** |
| 5 | 6 |
| 4 | 3 |
| 6 | 8 |
| 5 | 7 |
| 1 | 6 |
| 9 | 3 |
| 6 | 9 |

State the results of your analysis in APA format:

Show the hand calculation (type it) for the effect size (make sure to include equation):

3. A researcher hypothesized that the level of anxiety in UTD students is significantly greater than non-UTD students- due to the extensive research performed at UTD (the average anxiety level is 25). In order to test this hypothesis, he measured the level of the anxiety of five students. Below are his data.

|  |  |
| --- | --- |
| **Student #** | **Level of anxiety** |
| **Student 1** | 27 |
| **Student 2** | 25 |
| **Student 3** | 24 |
| **Student 4** | 28 |
| **Student 5** | 24 |
| **Student 6** | 29 |
| **Student 7** | 24 |

State the results of your analysis in APA format: