PSYC.4100 **ASSIGNMENT 1:** **2024-2025**

ATTITUDE TOWARD HIGHER TUITION

To understand better student attitude toward higher tuition and how it might be improved, researchers administered the Tuition Attitudes Scale (TAS) to 16 University of Winnipeg students on two occasions four weeks apart (*tas1* and *tas2*). Higher scores indicate more positive attitudes to higher tuition. Between *tas1* and *tas2*, students received credible messages that universities in Manitoba were underfunded, which compromised the quality of education. The researchers hypothesized that this information would make students more favourable to higher tuition.

Enter the following SPSS commands to generate data for this study. Replace the 0s in SEED with your UW student number (e.g., SET SEED = 11234567, if your SN = 1234567). Enter SPSS commands to answer the questions on the next page. Perform calculations (manually and / or in SPSS) and provide full explanations to show your understanding of analyses. Clearly relate calculations to specific parts of SPSS output. When you first calculate a basic quantity, explain it fully; then, do not explain it again except to make a new point. In general if there is more than one test for an hypothesis, demonstrate the various tests and how they correspond.

NB: Prepare your answer to each question separately, including for each question a listing of computer commands, computer output (with commands shown as well as analyses), and your written work. Identify clearly each package with your name and the question number. Each question will be uploaded to Crowdmark separately.

```
SET SEED = 10000000.
INPUT PROGRAM.
LOOP subj = 1 to 16.
END CASE.
END LOOP.
END FILE.
END INPUT PROGRAM.
COMPUTE #z   = RV.NORM(0,1).
COMPUTE tas1 = RND(20 + 5*(.7071*#z + .7071*RV.NORM(0,1))).
COMPUTE tas2 = RND(24 + 5*(.7071*#z + .7071*RV.NORM(0,1))).
FORMAT subj tas1 tas2 (F2.0).
LIST.
```

QUESTIONS

1. The population of UW students has a mean of 20 on the TAS. Do *tas2* results alone indicate that receiving financial information improved attitudes toward higher tuition? Explain the descriptive statistics and then perform and explain two relevant tests of the hypothesis, including how they correspond to one another. (20 marks)

2. Conduct graphical and quantitative analyses to examine whether people with more positive attitudes toward a tuition increase on *tas1* remained more positive relative to other students on *tas2*. Include analyses and explanations ***except those requested in question 3***. (20 marks)

3. Determine in several ways the significance of the relationship in question 2, showing how analyses are related. Also describe correlations among observed and created scores and what they reveal about the analysis. Duplicate relevant parts of the SPSS analyses from question 2. (20 marks)

4. Given the *tas1* and *tas2* data, did the intervening message improve attitudes about higher tuition? Explain your choice of statistical test. (20 marks)

5. What conclusions would be warranted about the impact of the message if *tas1* scores came from students who did not receive the message and *tas2* scores came from a separate group that did receive the message? Run the commands to generate the original variables and use the following commands to rearrange the data in SPSS to answer this question. The new dataset will have *tas* scores for 32 subjects, 16 from a control group who did not receive the message (*cond* = 1) and 16 from a treatment group that did receive the message (*cond* = 2). Compare the results of this analysis with question 4. (20 marks)

```
VARSTOCASES /MAKE tas FROM tas1 tas2 /INDEX = cond.
SORT CASES BY cond.
LIST.
```