**TU Dublin City Campus**

**Probability and Statistical Inference**

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**Week 4 Practical**

**Correlation**

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Download the zip file from Brightspace or the website that contains the datafiles we are using this week (survey.dat/survey.sav and the codebook for the survey that was used to generate the data – this includes a description of the variables - Note all the Total variable are calculated to be scale variables).

Unzip to a location that makes sense for you.

Make sure you have the data file and the notebook in the same folder or qualify the location of your data in your notebook.

**NOTE**: this zip file includes a code book which outlines the variable names given for each concept. For this lab you are interested in the variables Total scale scores (e.g. total optimism, total self-esteem etc)

* Launch R Studio and open the .rmd file for the lecture. Review the commands.
  + This file uses a .dat file, this is the SPSS file converted to a form easily readable by R
* Try to write the code to do the following:
  + Assess the variables for normality (i.e. can the data in the dataset for these variables be considered sufficiently close to the normal distribution for you to choose parametric tests)
    - Total Positive Affect
    - Total Life Satisfaction
    - Total Mastery
    - Total Optimism
  + Choose the test you think is correct based on your assessment of these variables (plus those considered during the lecture) – choose either Pearson, Spearman/Kendall to investigate the following:

1. Relationship between Total Positive Affect (independent variable) and Total Perceived Stress (dependent variable)
2. Relationship between Total Life Satisfaction (independent variable) and Total Perceived Control of Internal States (dependent variable)
3. Relationship between Total Mastery and Total Optimism (dependent variable)