1. **How to Install R?**
2. **Basic Operators**
   - Creating variables
   - + - * / ^
   - Delete all variables in memory

3. **Matrix Algebra**
   - Creating vectors
   - Inner product
   - Outer product
   - Combine vectors
   - Create a matrix
   - Inverse of a matrix

4. **Generate data from a distribution (taking uniform, normal, t, Chi-square distribution as examples)**

5. **Example (OLS)**
   - Use R build-in function lm()
   - Calculate OLS coefficients by ourselves

6. **R Resources (Useful Links)**

7. **Exercises**
   - Exercise 1:

   Verify the results of the example (suicide and unemployment) discussed in the class (5 models at page 57 in the slides).

   - Exercise 2:

   Generate a sample of 2000 from the following distributions and plot their histograms. Compare the 1%, 5%, and 10% critical values of these generated distributions with those in statistical tables.

   (1) A central chi-squared (1) distribution
   (2) A non-central chi-squared (1) distribution
   (3) Student t(1) distribution
   (4) Student t(5) distribution