

MS Module 19: Correlation (overview)

(The attached PDF file has better formatting.)

Reading: §12.5 Correlation

Know how to form the sample covariance and sample correlation from S_{xx} , S_{yy} , and S_{xy} , which are derived from the summary statistics.

Hypothesis testing for the correlation has two forms.

- To test the null hypothesis $H_0: \rho = 0$, we use a t test.
- To test the null hypothesis $H_0: \rho = \rho_0 \neq 0$, we use a *Fisher transformation*.

Know how to form confidence intervals for both the *Fisher transformation* and the correlation underlying the *Fisher transformation*. Final exam problems may give summary statistics and test these confidence intervals.

β_0 and β_1 depend on units of measurement. Changing a regression analysis from Centegrade to Fahrenheit changes the value of β_0 and β_1 . The textbook discusses transformations of variables in several sections. The final exam problems may give a linear regression in one measurement system and ask for the corresponding regression equation in another measurement system. The practice problems on the discussion forum show the type of questions that will be asked on units of measurement.