What you should know for the final exam:

1.Confidence Intervals for a population mean, population proportion, the difference between two populations means and the population proportions, One- sided confidence bounds (using normal distribution) 8.1- 8.9 -used for hypotheses testing

2.Testing hypotheses about a population mean, a population proportion, the difference between two population means and proportions (using normal distribution). You should know how to use both methods to make a decision – critical value approach and p-value, type I error and type II error, the power of the test, connection between hypotheses testing and a confidence interval. 9.1- 9.7.

3.Small sample inferences concerning one population mean (confidence interval and test of hypotheses) and two means 10.1-10.5 and 10.8 and testing the equality of variances – Chapter 10.7 (not Confidence Interval)

Please use the correct test and CI for inferences about a population mean or differences between two means. We use z when the population standard deviation is given, otherwise we use t -test

4.The analysis of variance – 11.1- 11.6 and 11.11 (one-way Anova):

checking assumptions,

to understand Anova table and being able to fill all missing values

F – test

being able to determine which populations have different means

(looking at computer outputs)

estimating a population mean,

estimating two populations difference

5.Linear regression and correlation – Ch 3 and Ch 12.1-12.7, we don't cover the hypothesis test about population correlation.

state and check assumptions

Read the output from Minitab (standard, textbook) and R

Be able to fill missing values in Anova table for regression

Check how good is model : F test, t-test for a slope , R-square

Interpretation of a slope and CI for a slope

r – correlation coefficient and R-square – relationship

estimation , prediction (CI and PI)