



# Full Syllabus



## Course Title

Introduction to Statistics and Data Analysis with R (0560.1823)

## Lecturer

Dr. Adi Sarid

## Semester

Spring 2021 (March thru June 21)

## Course requirements

Introduction to Probability (0560.2801 or equivalent); Mathematical Methods 1 (0560.2802 or equivalent)

## Final grade components

Final exam, Project (exact % split to be determined)

## Course schedule

Class no. / Date	Subject and Requirements (assignments, reading materials, tasks, etc.)
#1 (2021-03-03)	Introduction + R lab
#2 (2021-03-10)	Point estimation methods and confidence intervals
#3 (2021-03-17)	Confidence intervals (continued)
#4 (2021-03-24)	Hypothesis tests (one sample)
#5 (2021-03-31)	Hypothesis tests (two sample and goodness-of-fit)
#6 (2021-04-07)	Selected exercises; R lab
#7 (2021-04-14)	Independence test
#8 (2021-04-21)	Hypothesis tests (variance comparison, proportions)
#9 (2021-04-28)	Simple linear regression
#10 (2021-05-05)	Multiple linear regression
#11 (2021-05-12)	Stepwise algorithm; Selected exercises
#12 (2021-05-19)	ANOVA; Guest lecture (TBA)
#13 (2021-05-26)	Selected exercises, test preparation

## Required course reading

Runger G. & D. Montgomery: Applied Statistics and Probability for Engineers. Wiley, 7th ed., 2018.  
Walpole R.E., Myers R. H, Myers S. L., and Ye K.: Probability & Statistics for Engineers & Scientists. Prentice Hall, 9th ed., 2011.

## Optional course reading

Diez, D. M., Barr, C. D., & Cetinkaya-Rundel, M. (2012). OpenIntro statistics (pp. 174-175). OpenIntro.  
Wickham, H., & Grolemund, G. (2016). R for data science: import, tidy, transform, visualize, and model data. " O'Reilly Media, Inc."

## Comments

Course repository located at [https://github.com/adisarid/intro\\_statistics\\_R](https://github.com/adisarid/intro_statistics_R)



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