

# Biostatistics Meet-and-greet

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**ACIBADEM**  
MEHMET ALİ AYDINLAR  
ÜNİVERSİTESİ

# Ege Ülgen

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# Teaching Assistants

- Zeynep Şevval Düvenci
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- Ahmet Berkan Çiftçi
- Elif Özenoğlu
- Ariorad Moniri
- Ezgi Sıla Toklucu
- Ceyda Büyüker
- Serhan Aytekin
- Ömer Faruk Sülüker
- Kerem Birışık
- Laman Karimli
- Süleyman Eren SAÇMALI
- Eda Nur SARIÇAM
- Beril Ay
- Boran Aksakal
- Yaren Nur Demir
- Konuralp İlim
- Osman Acar
- Serra Nur Selek

# Syllabus

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Week	Date	Subject	HW	review
1	2022-10-06	<a href="#">Introduction to the Course</a>		
1	2022-10-06	<a href="#">Overview of Statistics/One-Variable Data Analysis</a>		
2	2022-10-13	Introduction to Programming with R		
3	2022-10-20	Two-Variable Data Analysis	HW1	
4	2022-10-27	Hypothesis Testing - One Sample		
5	2022-11-03	Hypothesis Testing - Two Samples		
6	2022-11-10	Hypothesis Testing - $>2$ Samples	HW2	
7	2022-11-17	Hypothesis Testing - Categorical Outcomes		review before MT 1
8	2022-11-24	<b>Midterm Exam</b>		
9	2022-12-01	Hypothesis Testing - Non-Parametric Tests		
10	2022-12-08	Linear Regression		
11	2022-12-15	Logistic and Poisson Regression	HW3	
12	2022-12-22	Sampling Methods and Missing Data		
13	2022-12-29	Power Analysis and Sample Size Calculation	Final Project	review before final
14	2022-01-05	Review before final		
15	2022-01-12	<b>Final Exam</b>		

# Lecture Slides & Scripts

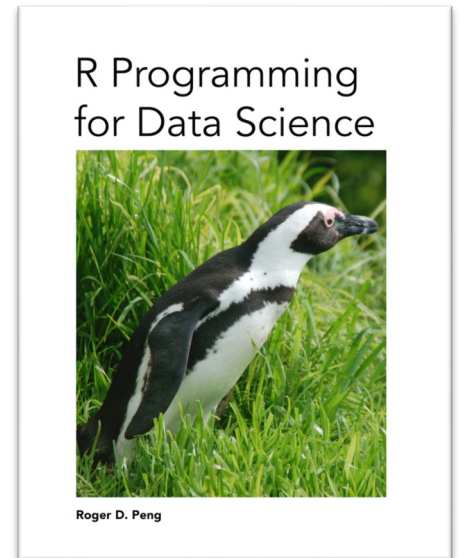
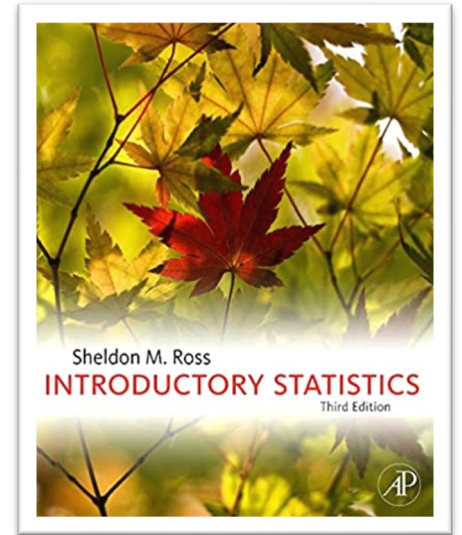
- All lecture slides and scripts are available on LMS and:  
[https://github.com/egeulgen/MED131\\_22\\_23](https://github.com/egeulgen/MED131_22_23)

# Course Evaluation

- Homework – 25%
- Mid-term – 25%
- Final exam – 30%
- Term project – 20%

# Reference Reading

- Sheldon Ross (2010) Introductory Statistics, Academic Press, 3rd edition
- Roger Peng (2016) R Programming for Data Science.
  - Buy it at any price at <https://leanpub.com/rprogramming>



Software







- R is a programming language and environment for **statistical computing** and **graphics**
- interactive data analysis
- high-level programming language
- **Packages** for almost everything:
  - Data processing and cleaning
  - Data visualization
  - Interactive web-apps
  - Machine learning routines
  - ...

# Installing R, RStudio

- Install R:  
<https://cran.r-project.org/>
- Install RStudio:  
<https://www.rstudio.com/products/rstudio/download/>

# More Resources for learning R

- An Introduction to R

Comprehensive introduction to base R. Go-to guide

<https://cran.r-project.org/doc/manuals/r-release/R-intro.pdf>

- RStudio Cheat Sheets

Cheatsheets for numerous packages

<https://www.rstudio.com/resources/cheatsheets/>

- R for Data Science

Introduction to data analysis using using R, focused on tidyverse packages

<http://r4ds.had.co.nz/>

- Data Visualization – A Practical Introduction

Textbook on data visualization, using ggplot2

<http://socviz.co/>