Schedule

NRES 710 – Fall 2024

Last compiled: 2024-09-30

## Schedule

Note: this schedule is subject to change. Please check for updates frequently. Also, if a due date listed here differs from that on WebCampus, please use the date listed on WebCampus! Thank you.

| Week | Dates | Tuesday | Thursday | Assignments |
| --- | --- | --- | --- | --- |
| 1 | Aug. 27, 29 | Syllabus and the Purpose of Statistics | Paper Discussion and Intro to R ([Code](materials/lecture_2.R)) | [Reading](papers/Johnson1999.pdf), [Reading](papers/Dushoff_etal_2019.pdf) - read before Aug. 29 |
| 2 | Sep. 3, 5 | Linear Regression ([Code](materials/lecture_3.R), [Data](materials/lecture_3_dataset1.csv)) | Linear Regression - results ([Code](materials/lecture_4.R)) | Quiz 1 - due Sep. 2 |
| 3 | Sep. 10, 12 | Exercise 1: Linear Regression, pt. 1 ([Link](exercise_1.html)) | Linear Regression - assumptions ([Code](materials/lecture_5.R), [Data1](materials/lecture_5_good_data.csv), [Data2](materials/lecture_5_nonnormal_data.csv), [Data3](materials/lecture_5_nonlinear_data.csv), [Data4](materials/lecture_5_heteroscedastic_data.csv), [Data5](materials/lecture_5_autocorrelated_data.csv)) | Quiz 2 - due Sep. 11; [Reading](papers/zuur_etal_2010.pdf) |
| 4 | Sep. 17, 19 | Linear Regression - predictions ([Code](materials/lecture_6.R), [Data](materials/lecture_6_biomass_data.csv)) | Exercise 2: Linear Regression, pt. 2 ([Link](exercise_2.html)) | Exercise 1 - due Sep. 16 |
| 5 | Sep. 24, 26 | Analysis of Categorical Data ([Code](materials/lecture_7.R), [Data](materials/lecture_7_seal_data.csv)) | Analysis of Categorical Data - cont. ([Code](materials/lecture_8.R), [Data](materials/lecture_8_dataset1.csv)) | Quiz 3 - due Sep. 23; Exercise 2 - due Sep 25 |
| 6 | Oct. 1, Oct. 3 | Analysis of Categorical Data - posthoc tests ([Code](materials/lecture_9.R), [Data](materials/lecture_9_seasons.csv)) | Exercise 3: Analysis of Categorical Data ([Link](exercise_3.html)) | [Reading](papers/ruxton_beauchamp_2008.pdf) - read before Oct. 1 |
| 7 | Oct. 8, 10 | Analysis of X as Continuous or Categorical ([Code](materials/lecture_10.R), [Data1](materials/lecture_10_dataset1.csv), [Data2](materials/lecture_10_dataset2.csv)) | Multi-variable Modeling ([Code](materials/lecture_11.R), [Data1](materials/lecture_11_dataset1.csv), [Data2](materials/lecture_11_dataset2.csv)) | Quiz 4 - due Oct. 7; [Reading](papers/cottingham_etal_2005.pdf) - read before Oct. 8; Exercise 3 - due Oct. 9 |
| 8 | Oct. 15, 17 | Multi-variable Modeling - Collinearity ([Code](materials/lecture_12.R), [Data](materials/lecture_12_dataset1.csv)) | Exercise 4: Collinearity ([Link](exercise_4.html)) | NA |
| 9 | Oct. 22, 24 | *No class* | *No class* | Brian at conference; Exercise 4 - due Oct. 23; Quiz 5 - due Oct. 24 |
| 10 | Oct. 29, 31 | Multi-variable Modeling - Interactions ([Code](materials/lecture_13.R), [Data1](materials/lecture_13_dataset1.csv), [Data2](materials/lecture_13_dataset2.csv), [Data3](materials/lecture_13_dataset3.csv), [Data4](materials/lecture_13_dataset4.csv), [Data5](materials/lecture_13_dataset5.csv)) | Multi-variable Modeling - Interactions (continued) | [Reading](papers/odadi_etal_2011.pdf) - read before Oct. 31 |
| 11 | Nov. 5, 7 | Exercise 5: Interactions ([Link](exercise_5.html)) | Random-effect Models ([Code](materials/lecture_15.R), [Data1](materials/lecture_15_dataset1.csv), [Data2](materials/lecture_15_dataset2.csv)) | Quiz 6 - due Nov. 6 |
| 12 | Nov. 12, 14 | Mixed-effect Models ([Code](materials/lecture_16.R), [Data1](materials/lecture_16_dataset1.csv), [Data2](materials/lecture_16_dataset2.csv)) | Repeated Measures ([Code](materials/lecture_17.R), [Data](materials/lecture_17_dataset1.csv)) | Exercise 5 - due Nov. 11 |
| 13 | Nov. 19, 21 | Exercise 6: Mixed-effect Models ([Link](exercise_6.html)) | *No class (Thanksgiving)* | None |
| 14 | Nov. 26, 28 | Nested Designs ([Code](materials/lecture_18.R), [Data1](materials/lecture_18_dataset1.csv), [Data2](materials/lecture_18_dataset2.csv)) | Pseudoreplication ([Code](materials/lecture_19.R), [Data](materials/lecture_19_dataset1.csv)) | Quiz 7 - due Nov. 25; Exercise 6 - due Nov. 27 |
| 15 | Dec. 3, 5 | Exercise 7: Nested Designs ([Link](exercise_7.html)) | Synthesis and Next Steps | Quiz 8 - due Dec. 4; [Reading](papers/guthery_2008.pdf) - before last class |
| Finals | Dec. 10, 12 | *No class* | *No class* | Exercise 7 - due Dec. 9. Good luck on your exams! |