

Working with data and displaying data interactively

A short course for the Department of Pharmacology and Experimental Neuroscience, UNMC , Omaha, NE

November 2023

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Lecture time: Tuesdays from 12 - 2 pm

Office Hours: After class or by appointment

Course web page: <http://mamajumder.github.io/unmc>

Text books: Notes and various resources will be provided during lectures.

Recommended books:

1. Modern Data Science with R by Baumer et. al.
2. Dynamic Documents with R and Knitr by Yihui Xie

Course outline (approximate): There will be six sessions in three days. Each session will be for an hour.

Day	Session	Chapter Description	Date
1	1	Introduction and Organization of Data	Nov 28, 2023
1	2	Effective Visualization of Data	Nov 28, 2023
2	1	Supervised Learning from the Data	Dec 12, 2023
2	2	Unsupervised Learning from the Data	Dec 12, 2023
3	1	Creating Reproducible Reports Using R	Dec 19, 2023
3	2	Demonstration of a Case Study with Experimental Neuroscience Data	Dec 19, 2023

Practical Assignments: There will be six practical assignments throughout the course.

Course outcomes: At the end of the course, participants will create a data analysis report.