R Coding - Course Syllabus -

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Lecture 0 - Requirements: Introduction to R

Mathematics:

- Vectors & Matrices
- Matrix Algebra
- Functions

Programming:

- What is a Programming Language?
- Programming & Natural Language: Similarities and Differences

\mathbf{R}

- What is the R Language?
- CRAN & Packages
- Objects and Functions
- R Environment
- R messages
- The R GUI
- The RStudio IDE
- Working with the RStudio IDE
- How to write R code: style guidelines

Basic R:

- Assignment Operator and Variables
- Some fundamental R commands
- Arithmetic with R
- Data Types
- Data Structures
- Accessing values & Subsetting

Intermediate R:

- Relational Operators
- Logical Operators
- Conditional subsetting
- Conditional Statements
- Looping Together
- Functions

Extra Topics:

- Tidy Data
- Importing Data with R
- Statistics

Lecture 2: Tidyverse

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Lecture 3: Tidymodel

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Lecture 4: Shiny & Flexdashboard

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