**Quiz Focus Areas**

**Basic data foundations**:

Understand measure of dispersion, law of large numbers, central tendency

What is an independent and dependent variable (within a specific dataset)

**Vectors**:

How to create a vector with a specified list of elements (numbers, etc). Do basic functions on a vector of numbers (ex. sum the numbers).

**Data frames**:

Understand data frames and be able to write R code that outputs a column, a row, or a specific element in the data frame. Also be able to add or remove a column from a data frame. Understand how to access the data frame using “row / column indexing”.

**Functions**:

Be able to create and use a function

Understand the quantile function - what is it, why to use it, how to use it

Understand the sample function - what is it, why to use it, how to use it

Understand the replicate function - what is it, why to use it, how to use it

Understand the histogram function - what is it, why to use it, how to use it

How to use ggplot (and the related plots), including with maps

**Linear models**:

How to create a basic model and how to measure quality of the model (in our readings)

**Quiz format:**

* 1 hour, timed
* 21+ questions, some question are multi part
* You don’t need to be in R
* No open book, open notes
* Question examples
  + You’ll be given some R code
  + You will be asked questions about the code ie
    - What does this line of code do
    - What will the result be
  + You will be asked to write some R code
  + The R code you write doesn’t have to be syntactically correct but close
  + There will be some “concept/topical” questions as noted above