**Data Management**

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| **Introductory** | **Intermediate** | **Advanced** |
| * importing data (read.csv) * inspecting data (str, summary, dim, head, tail) * data types * changing data type * extracting data ($,[]) | * formatting data (date-time, cutting strings) * merging dataframes with common key * extracting data using relational statements and logicals ([], which, subset) * lists in R | * merging macro and micro dataframes * dataframe manipulation with dplyr * dataframe layout manipulation with tidyr * splitting data, apply functions to subsets, and combine the results (plyr, dplyr) |

**Data Analysis**

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| **Introductory** | **Intermediate** | **Advanced** |
| * built in functions * scripting * commenting | * conditional statements (if, else) * repeated processes (loops, functions) * using relational statements * using logical statements * extracting results from statistical analyses | * using apply statements (vectorization) instead of loops * using while or repeat statements * simulation |

**Software Skills**

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| **Introductory** | **Intermediate** | **Advanced** |
| * folder structure * finding help (?) * troubleshooting errors with help file (arguments) * organized code * readable code * commenting * naming practices | * overwriting names (package installation) * locating packages/functions to carry out desired process * troubleshooting errors * using functions/loops for common tasks * using RMarkdown for reproducible documents | * differences in R environments * packrat for project management * using version control within projects * different options within code chunks in RMarkdown or Sweve * integrating LaTeX code into reproducible documents |

**Data Visualization**

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| **Introductory** | **Intermediate** | **Advanced** |
| * built in functions * turning options off/on with TRUE/FALSE * changing plot labels | * changing plotting characters, colors, line styles, etc. * using ggplot2 * non-aggregated plots * dividing plotting window * multivariate plots | * incorporating aesthetics, geometry, statistics, scale transformation, and grouping * interactive plots * mapping plots |