

Concordance between OpenIntro textbook and R modules

The following table shows the concordance between sections of the [OpenIntro textbook](#) and the R modules.

Modules should be assigned in roughly the order listed here. `Intro_to_R.pdf` must come first (be sure to distribute the PDF file to students, not the R Markdown file), followed by “Using R Markdown” (distributed as an R Markdown file—every module after the first will be given to students as an R Markdown file). Although some modules are designed to be somewhat independent and self-contained, it is safest to do them in the order listed.

Note that the `Intro_to_simulation` modules do not quite correspond to the book. I think it is easier to introduce simulation with coin flips rather than permutation tests. When formal hypothesis tests are introduced in 2.3 with a permutation test and then 2.4 with a test for one-proportion, the `Hypothesis_testing_with_simulation` modules do respect that ordering.

Section:	Filename:	Topics covered:
N/A	<code>Intro_to_R.pdf</code>	Intro to R and RStudio Server, practice at the command prompt, loading packages, getting help, understanding data files and accessing variables, creating new projects in RStudio Server, uploading files
N/A	<code>Using_R_Markdown.Rmd</code>	R Markdown philosophy, syntax, R code chunks, R Markdown environment vs Global Environment, inline R code, exporting files
1.6	<code>Summary_statistics.Rmd</code> <code>Graphing_numerical_data.Rmd</code>	Mean, variance, and sd; median and IQR; five-number summary Histograms, scatterplots
1.7	<code>Tables.Rmd</code> <code>Graphing_categorical_data.Rmd</code> <code>Graphing_grouped_numerical_data.Rmd</code>	Tables (frequency, relative frequency, contingency) Bar graphs (simple, side-by-side, stacked) Boxplots, grouped histograms

2.1, 2.2	Intro_to_simulation_1.Rmd Intro_to_simulation_2.Rmd	Coin flips (the binomial distribution in disguise) and sampling variability Permutation tests and sampling distribution models
2.3	Hypothesis_testing_with_simulation_1.Rmd (Rubric_for_inference.Rmd)	Hypothesis testing framework for a two-proportion test as a permutation test (Reference guide with outline for conducting hypothesis tests)
2.4	Hypothesis_testing_with_simulation_2.Rmd	Hypothesis testing framework for a one-proportion test using a simulated binomial distribution
2.5, 2.6	Normal_models.Rmd z_scores.Rmd QQ_plots.Rmd	Central limit theorem, normal distributions, percentiles z-scores QQ plots
2.7	Sampling_distribution_models.Rmd	The normal model as a sampling distribution model
2.8	Confidence_intervals.Rmd	Confidence intervals
3.1	Inference_for_one_proportion.Rmd	Inference for a single proportion, both the one-proportion z-test and the one-proportion confidence interval
3.2	Inference_for_two_proportions.Rmd	Inference for two proportions, both the pooled two-proportion z-test and the two-proportion confidence interval
3.3	Chi_square_goodness_of_fit_test.Rmd	Chi-square distribution, chi-square goodness-of-fit test
3.4	Chi_square_test_for_independence.Rmd	Chi-square test for independence
4.1	Inference_for_one_mean.Rmd	Student t distribution, one-sample t-test
4.2	Inference_for_paired_data.Rmd	Paired t-test

4.3	Inference_for_two_independent_means.Rmd	Two-sample t-test
4.4	ANOVA.Rmd	ANOVA
5.1	Correlation.Rmd	Correlation
5.2, 5.3, 5.4	Regression.Rmd	Regression (simple linear)