H5719a **Blocking and Sampling** 30 min.
Explains random sampling and the difference between single-factor and multi-factor experiments.

H5719b **Samples and Surveys** 30 min.
Explains stratified random sampling and examines a 1936 Gallup election poll which yields information about undercoverage.

H5720a **What Is Probability?** 30 min.
Distinguishes between deterministic phenomena and random phenomena.

H5720b **Random Variables** 30 min.
Covers independence, the multiplication rule for independent events, and discrete and continuous random variables.

H5721a **Binomial Distributions** 30 min.
Explains how to calculate the mean and standard deviation of binomial distributions and shows a representative example of binomial distribution.

H5721b **The Sample Mean and Control Charts** 30 min.
Uses roulette and business to demonstrate the use of the central limit theorem, control chart monitoring of random variation, creation of x-bar charts, and definitions of control limits.

H5722a **Confidence Intervals** 30 min.
Explains the confidence interval using population surveys to show how margin of error and confidence levels are interpreted.

H5722b **Significance Tests** 30 min.
Illustrates the basic reasoning behind tests of significance using a hiring discrimination case.

H5723a **Inference for One Mean** 30 min.
Explores inference about the mean of a single distribution, with emphasis on paired samples and the t-confidence interval and test.

H5723b **Comparing Two Means** 30 min.
Explains how to recognize a two-sample problem and to distinguish it from one- and paired-sample situations.

H5724a **Inference for Proportions** 30 min.
Shows confidence intervals and tests for comparing proportions applied in government estimates on underemployment.

H5724b **Inference for Two-Way Tables** 30 min.
Covers the chi-square test and the relationship between two categorical variables.

H5725a **Inference for Relationships** 30 min.
Explains inference for simple linear regression, emphasizing slope and prediction.

H5725b **Case Study** 30 min.
Shows planning data collection, collecting and picturing data, drawing inferences, and evaluating conclusions.