List of Changes

Statistical Techniques in Business and Economics
18th Edition
Douglas Lind, William Marchal, Samuel Wathen
ISBN: 9781260239478 / © 2021

SEE LIST OF CHANGES ATTACHED.
McGraw-Hill Connect® is a course management and adaptive learning solution that enhances your unique voice and teaching style. As your partner, we’re committed to helping you achieve your course goals and unlock student potential. That’s why we’ve made meaningful updates to this edition.

New In Connect:

Smartbook® 2.0 – Our adaptive reading experience has been made more personal, accessible, productive, and mobile.

Interactive Data Problems – Data problems that allow students to visualize and interact with data in different ways. Students use this tool to manipulate data and answer a variety of accompanying problems that test multiple levels of understanding.

Applying Excel Problems – New! Assignable exercises with associated Excel data files. Students click on the assignment in Connect and link to data within Excel. They use that data to solve the problem and then come back into Connect to add the answer, which is auto-graded.

Excel Tutorial Videos – A set of professionally developed videos to help students visualize and interpret standard statistical techniques. Includes narrated step-by-step explanations using data sets.

Algorithmic Test Bank – Auto-graded test bank problems using different numeric values each time a problem is served up to the student. They may also be assigned to ensure that students are answering their own work.

Business Statistics Prep Modules – BStat, Excel, and Math modules are assignable in Connect as prerequisite modules with brief short videos and check questions that are auto-graded. Assigned early in the course, it gets all students in the class on the same level of preparedness.
Additional Value When You Upgrade

• **NEW!** Free mobile access to SmartBook 2.0 assignments and the digital textbook with the ReadAnywhere app.

• **NEW!** Remoting proctoring and browser-locking capabilities allowing for more control over the integrity of online assessments.

• **NEW!** Ability to create enhanced assignments personalized to each student’s needs.

• Accessibility and student data security enhancements.

• More advanced student and class reporting capabilities.

• 99.99% platform uptime

Visit [mheducation.com/connect](http://mheducation.com/connect) for details.
CHAPTER 1: What Is Statistics?
- Updated graphic on data analytics.
- Updated examples.
- Newly revised Ethics and Statistics section.
- New exercise 17 requiring statistical software.
- Updated exercise 19.

CHAPTER 2: Describing Data: Frequency Tables, Frequency Distributions, and Graphic Presentation
- Updated examples.
- Updated exercises 33, 38, 47, 48.
- New exercise 44 using extensive data from the pizza industry requiring statistical software.

CHAPTER 3: Describing Data: Numerical Measures
- Updated examples.
- Revised example/solution showing the calculation of the sample mean.
- Revised example/solution showing the calculation of the geometric mean.
- Revised example/solution showing the calculation of the sample standard deviation.
- Updated Statistics in Action with most recent Major League Baseball data.
- The section of the relative positions of the mean, median, and mode as well as the concept of skewness has been rewritten with new illustrations.
- Updated exercises 21, 23, 25, 30, 31, 32, 33, 34, 73, 77, 82.

CHAPTER 4: Describing Data: Displaying and Exploring Data
- Updated examples.
- Revised section on computing quartiles.
- Box plots are generated with Excel with accompanying Connect tutorial.
- Updated exercise 16 with Boston Red Sox salary data.
- Updated Self-Review 4–5 that includes data.
- A new section on the correlation coefficient added to the major section, “Describing the Relationship Between Two Variables.”
- Exercises 17, 18, and 32 provide data and asks the user to produce scatter plots with statistical software.
- New exercise 24.

CHAPTER 5: A Survey of Probability Concepts
- Updated examples.
- New exercises 90 and 93.
- Updated exercises 9, 10, and 58.
- Revised example/solution showing the calculation of empirical probability.
- New “Principles of Counting” example/solution based on blood type.

CHAPTER 6: Discrete Probability Distributions
- Updated examples.
- New exercises 9, 10, 17, 18, 24, 25, 49, 66, 67, 68, 69.
- Updated exercise 5, 7, 8, 24, 58.
- New example/solution using the binomial distribution to predict purchase behavior with debit and credit cards.

For more information, contact your rep at mhhe.com/rep or visit mheducation.com
CHAPTER 7: Continuous Probability Distributions
- New opening page and exercise.
- Revised example/solution demonstrating the uniform probability distribution.
- For all uniform distribution examples and exercises, users are asked to compute the mean and standard deviation.
- Updated and revised exercise 1, 2, 5, 7, 8, 11, 12, 28.
- New exercises 15, 19, 20, 35, 36, 41, 43, 47, 55, 61.
- Added emphasis on defining the probability of a particular value of a continuous random variable to be zero.
- Removed the section: “The Normal Approximation to the Binomial.”
- Using statistical software, there is no need for approximations.

CHAPTER 8: Sampling, Sampling Methods, and the Central Limit Theorem
- New chapter title: “Sample, Sampling Methods, and the Central Limit Theorem”
- New section titled: “Research and Sampling.” This section now introduces the idea of sampling by discussing the research process (i.e., posing a research question, collecting data, processing the data, and making data-based inferences and conclusions). The section also discusses ethical guidelines for selecting representative samples from populations.
- Revised Self-Review 8-1.
- Revised Statistics in Action about biased sampling.
- New section: “Sample Mean as a Random Variable.”
- Revised example/solution demonstrating sampling, the sample mean as a random variable, and the meaning and interpretation of sampling error.
- New section: “Standard Error of the Mean.”
- New Exercises 14, 15, and 16.
- Updated exercises 12, 13, 18, 19, 20, 21, 25, 26, 31, 32, 36.

CHAPTER 9: Estimation and Confidence Intervals
- Introduction now connects Chapter 8 to Chapter 9 by discussing how sample data are used to estimate population parameters.
- More emphasis placed on the margin of error in the calculation and interpretation of a confidence interval.
- Revised example/solution demonstrating the calculation and interpretation of a confidence interval estimating a population mean.
- Revised example/solution demonstrating the calculation and interpretation of a confidence interval estimating a population proportion.
- Revised example/solution demonstrating the margin of error in computing a sample size.
- Section “Finite-Population Correction Factor” emphasizes the effect of finite populations on the margin of error.
- New exercises 17, 41, 42, 43, 44, 45, 46.
- Updated exercises 5, 11, 12, 19, 22, 25, 32, 33, 35, 37, 41, 42, 43, 44, 45, 46, 47, 51, 52, 54, 55, 58, 61.

CHAPTER 10: One-Sample Tests of Hypothesis
- The chapter now relies on statistical software to compute p-values.
- Revised example/solution demonstrating the hypothesis testing procedure with added emphasis on the significance level and the Type I error probability.
- Revised Self-Review 10-1.
- Revised section titled: p-value in hypothesis testing.

For more information, contact your rep at mhhe.com/rep or visit mheducation.com
• Revised Self-Review 10-2.
• Revised example/solutions demonstrating hypothesis testing with the t-statistic.
• New exercises 33 and 34.

CHAPTER 11: Two-Sample Tests of Hypothesis
• Revised explanation comparing independent and dependent sampling.
• Updated exercises 4 and 9.
• Exercises 17 through 46 are now structured with multi-item responses providing users with directed questions.

CHAPTER 12: Analysis of Variance
• Revised Self-Review 12-2.
• Revised Self-Review 12-3.
• Revised Self-Review 12-4.
• Updated exercises 1 through 6, 9, 10, 13, 14, 29, 30, 31, 32, 34, 35, 36, 39, 40, 41, 42, 43, 44, 45.
• New Statistics in Action illustrating ANOVA.

CHAPTER 13: Correlation and Linear Regression
• Chapter encourages users to compute p-values with statistical software including on-line p-value calculators.
• New exercises 17, 35, 41, 43.
• Updated exercises 36, 47, 48, 49, 51, 52, 57, 58, 59.

CHAPTER 14: Multiple Regression Analysis
• New Statistics in Action describing spurious correlation.
• Updated exercises 1, 2, 26, 27, 28, 30.

CHAPTER 15: Nonparametric Methods: Nominal
• Level Hypothesis Test
• Revised chapter face page.
• Revised example/solution testing two population proportions.
• New Exercises 24 and 46.
• Updated Exercise 31.

CHAPTER 16: Nonparametric Methods: Analysis of Ordinal Data
• Revised chapter face page.
• Deleted section “Using the Normal Approximation to the Binomial.”
• Revised example/solution: Hypothesis test of the median
• Revised example/solution: Rank correlation.
• New Exercises 4, 5, 6, 21.
• Updated exercises 28 and 29.

CHAPTER 17: Index Numbers
• Entire chapter is updated with current dates and data.

CHAPTER 18: Forecasting with Time Series Analysis
• Completely rewritten to focus on time series forecasting.
CHAPTER 19 Statistical Process Control and Quality Management
• Updated 2018 Malcolm Baldrige National Quality Award winners.

CHAPTER 20: An Introduction to Decision Theory
• Updated exercises.
Affordability & Outcomes

- Flexibility! More choice. You decide.
- Multiple options at multiple price points!
- Delivery Options: Inclusive Access, rental, purchase.

Visit [mheducation.link/realvalue](http://mheducation.link/realvalue) for details.

Support At Every Step

Find all the resources you need for a successful semester in one spot: [supportateverystep.com](http://supportateverystep.com).

Faculty support is critical to the success of implementing and using digital courseware. That’s why we teamed up with faculty to create a website dedicated to providing above-and-beyond support. From initial training to implementing new tools to digging into the data, we’re here to help.

Let us know how we can partner with you at every step.