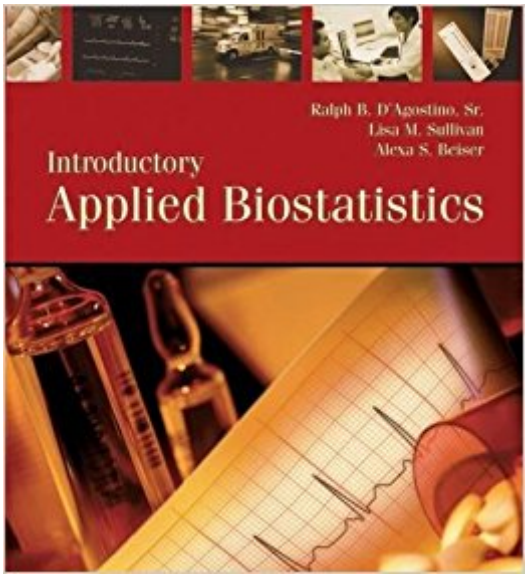
Introductory Applied Biostatistics (with CD-ROM)



Synopsis

INTRODUCTORY APPLIED BIOSTATISTICS provides a solid and engaging background for students learning to apply and appropriately interpret statistical applications in the medical and public health fields. The many examples drawn directly from the authors' remarkable clinical experiences with applied biostatistics make this text relevant, practical, and interesting for students. This flexible textbook encourages students to master application techniques by hand before moving on to computer applications, with SAS programming code and output for each technique covered in every chapter. The majority of the textbook addresses methods for statistical inference, including one- and two-sample tests for means and proportions, analysis of variance techniques, correlation, and regression analysis. For each topic, the book addresses methodology, including assumptions, statistical formulas, and appropriate interpretation of results.

Book Information

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Customer Reviews

1. INTRODUCTION. 2. MOTIVATION. Introduction. Vocabulary. Population Parameters. Sampling and Sample Statistics. Statistical Inference. 3. SUMMARIZING DATA. Introduction. Background. Descriptive Statistics and Graphical Methods. Key Formulas. Statistical Computing. Problems. 4. PROBABILITY. Introduction. Background. First Principles. Combinations and Permutations. The Binomial Distribution. The Normal Distribution. Key Formulas. Applications Using SAS. Problems. 5. SAMPLING DISTRIBUTIONS. Introduction. Background. The Central Limit Theorem. Key Formulas. Applications Using SAS. Problems. 6. STATISTICAL INFERENCE: PROCEDURES FOR .

Introduction. Estimating . Testing Hypotheses Concerning . Key Formulas. Statistical Computing. Problems. 7. STATISTICAL INFERENCE: PROCEDURES FOR (1- 2) Introduction. Statistical Inference Concerning (1- 2). Power and Samples Size Determination. Key Formulas. Statistical Computing. Problems. 8. CATEGORICAL DATA. Introduction. Statistical Inference Concerning p. Cross-tabulation Tables. Diagnostic Tests: Sensitivity and Specificity. Statistical Inference Concerning (p1-p2). Chi-Square Tests. Precision, Power and Sample Size Determination. Key Formulas. Statistical Computing. Problems. 9. COMPARING RISKS IN TWO POPULATIONS. Introduction. Effect Measures. Confidence Intervals for Effect Measures. The Chi-Square Test of Homogeneity. Fisher's Exact Test. Cox-Mantel-Haenzel Method. Precision, Power and Sample Size Determination. Key Formulas. Statistical Computing. Problems. 10. ANALYSIS OF VARIANCE. Introduction. Background Logic. Notation and Examples. Fixed vs. Random Effects Models. Evaluating Treatment Effects. Multiple Comparisons. Repeated Measures Analysis of Variance. Key Formulas. Statistical Computing. Problems. 11. CORRELATION AND REGRESSION. Introduction. Correlation Analysis. Simple Linear Regression. Multiple Regression Analysis. Logistic Regression Analysis. Key Formulas. Statistical Computing. Problems. 12. LOGISTIC REGRESSION ANALYSIS. Introduction. The Logistic Model. Statistical Inference for Simple Logistic Regression. Multiple Logistic Regression. ROC Area. Key Formulas. Statistical Computing. Problems. 13. NONPARAMETRIC TESTS. Introduction. The Sign Test (Two Dependent Samples Test). The Wilcoxon Signed-Rank Test (Two Dependent Samples). The Wilcoxon Rank Sum Test (Two Independent Samples). The Kruskal-Wallis Test (k Independent Samples). Spearman Correlation (Correlation between Variables). Key Formulas. Statistical Computing. Problems. 14. INTRODUCTION TO SURVIVAL ANALYSIS. Introduction. Incomplete Follow-Up. Time to Event. Survival Analysis Techniques. Appendix A: Introduction to Statistical Computing Using SAS. Introduction to SAS. The Data Step. Appendix B. Statistical Tables. Statistical Tables. SAS Programs used to generate table entries.

Ralph D'Agostino, Sr. is Professor of Mathematics, Statistics, and Public Health at Boston University. He is a respected and widely published statistician with over 30 years of experience in running clinical trials and epidemiological research. He is a Senior Editor of Statistics in Medicine, Associate Editor of the American Journal of Epidemiology, on the editorial board of the Journal of Hypertension, and Fellow of the American Statistical Association and Epidemiologic Section of the American Heart Association. He is Co-Principal Investigator and Director of Data Management and Statistical Analysis for the Framingham Heart Study (a study collecting data on three generations

that has been establishing the relation of risk factors that contribute to cardiovascular disease for over 50 years). He is also the Executive Director of Biometrics and Data Management for the Harvard Clinical Research Institute. He has been a consultant to the Food and Drug Administration since 1974, and has served on a number of drug and devices advisory committees. His interests are in biostatistical methods, robust procedures, longitudinal data analysis and multivariate data analysis. Dr. D'Agostino has received numerous awards, including the Food and Drug Administration Commissioner's Special Citation in 1981 and 1995.). He is co-author of five books in various fields of statistical methodology.Lisa Sullivan is an Associate Professor of Biostatistics at the School of Public Health, Associate Professor of Mathematics and Statistics at Boston University, and Assistant Dean for Undergraduate Education in Public Health at Boston University. She received both her M.A. and Ph.D. from Boston University. She has won numerous awards for excellence in teaching and her research interests include applied biostatistics, longitudinal data analysis, design and analysis of clinical trials, and hierarchical modeling. She spends the majority of her time in the Boston University Statistics and Consulting Unit working on the Framingham Heart Study. Her recent research has focused on developing health risk appraisal functions to quantify individuals' risks of developing cardiovascular disease. She has published dozens of articles in prestigious periodicals such as the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, NEW ENGLAND JOURNAL OF MEDICINE, and STATISTICS IN MEDICINE. Outside of work, Lisa enjoys running and cooking.Alexa Beiser is Professor of Biostatistics in the School of Public Health at Boston University. She received her M.A. from University of California at San Diego, and her Ph.D. from Boston University. Her research interests include clinical trials methodology, statistical computing, and survival analysis. Dr. Beiser joined the Framingham Study in 1994 after spending many years collaborating on a variety of pediatric research projects. She is primarily involved in the investigation of risk factors for stroke, dementia, and Alzheimer's Disease using data collected as part of the Framingham Study. Dr. Beiser's foremost methodological interest is in estimation of lifetime risk of disease. Dr. Beiser has published articles in the NEW ENGLAND JOURNAL OF MEDICINE, the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, STATISTICS IN MEDICINE, STROKE and NEUROLOGY. She enjoys reading, traveling and spending time with her four children.

It's an excellent text for the biostatistics with clarity and dynamic for explaining the principles of evaluating and calculating data, nevertheless I hoped a little more examples focused not only in obtaining means, p- value, correlation, etc. but a complete and clear interpretation of some

examples I’ve been preferred.

This is the "required" textbook for my biostatistics course and after reading most of the chapters, I can see why. Being someone with a weak mathematical background, I find this book to be extremely clear and helpful, taking a step by step approach which is very easy to follow. All the examples are relevant to what is being explained, all the formulas are numbered so when they refer to them later in the text it’s easy to find them, and at the end of each chapter is a table summarizing all the formulas and when to use them. As for the answers to the problems, there is a Students Solution Manual available, although I don’t see the need for it because as it has been mentioned before, there are plenty of practice examples within the text, and I also have an instructor that can help me go through the problems if I don’t understand, instead of simply giving me the answer.

Text was awesome! Very helpful. Didn’t use the CD-ROM but probably just as helpful as the text. Even if your instructor leaves you to figure it out on your own, it is not hard to follow. If you have trouble understanding exactly how the concept works, as a tip, use youtube.com, and it aligns for what’s going on in the text.

I purchased this for a class and have NOT re-sold it after the class. It is a great introduction to BioStats and offers a lot of practical medical examples to follow along with. It can get a little bogged down with details, but overall a great stats textbook.

Actually found myself loosing track of time reading the book because it is that readable. However, the index is very poor so it is difficult to find information in it later. I ended up using Google because it was quicker -- even getting bad sites. More use of color could be used to highlight key information.The information is good, when you can find it.

Great condition

Wonderful!

It helped me so much!! I’m very happy with the purchase! The book it’s very clear and have a lot of examples.

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