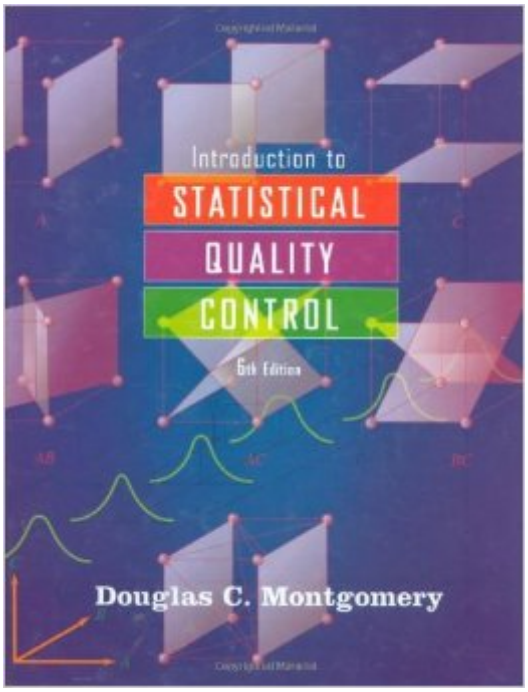
Introduction To Statistical Quality Control



Synopsis

The trusted guide to the statistical methods for quality control. Quality control and improvement is more than an engineering concern. Quality has become a major business strategy for increasing productivity and gaining competitive advantage. Introduction to Statistical Quality Control, Sixth Edition gives you a sound understanding of the principles of statistical quality control (SQC) and how to apply them in a variety of situations for quality control and improvement. With this text, you'll learn how to apply state-of-the-art techniques for statistical process monitoring and control, design experiments for process characterization and optimization, conduct process robustness studies, and implement quality management techniques. You'll appreciate the significant updates in the Sixth Edition including: * In-depth attention to DMAIC, the problem-solving strategy of Six Sigma. It will give you an excellent framework to use in conducting quality improvement projects. * New examples that illustrate applications of statistical quality improvement techniques in non-manufacturing settings. Many examples and exercises are based on real data. * New developments in the area of measurement systems analysis * New features of Minitab V15 incorporated into the text * Numerous new examples, exercises, problems, and techniques to enhance your absorption of the material

Book Information

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Customer Reviews

Doug Montgomery is an excellent instructor and author. I have taken short courses from him. He teaches statistics in the Engineering School at Arizona State. He is known for his books on

engineering statistics and has written some excellent texts on design of experiments, response surface methodology, linear regression and quality control. He is well acquainted with the Deming philosophy for quality , Taguchi designs and the six sigma concept. This book on statistical quality control introduces control chart methods and all the other tools of statistical quality control with the expertise that few have.The book is very accessible to statisticians engineers and others with good mathematical backgrounds but not necessarily strong trtaining in statistics. A virtue of Montgomery in all the books he has authored or coauthored is the clarity of presentation and the ability to reach a wide audience of non-statisticians.

The book gives an overview of the importance of quality management, the basics of statistics (variability, distributions, etc.), different methods of statistical process control, the use of control charts, capability analysis, design of experiments, process optimization, and sampling. I found all of the chapters informational and practical.Montgomery does a great job of presenting the theory, giving examples, and helping the reader understand the big picture of various concepts. For example, Montgomery states that a "Pareto chart does not automatically identify the most important defects, but rather only those that occur most frequently," and then gives an example illustrating when this can be so. This is something that might have been overlooked if not pointed out to the reader.While to book is rather current in introductory theory and practice, there are some relics from previous editions. For example, the inclusion of a random number table in the appendix is rather useless, since all modern calculators and spreadsheets have random number functions. This minor complaint aside, the book is solid and worth having.

This is a rather comprehensive book on SQC. It benefits from a good introductory treatment of Design of Experiments, a subject sorely missing from most SQC texts. The arrangement of topics in the book is logical from both pedagogical and practical points of view, and the author’s stress on improvement -- rather than control -- is the right one for the readers.

Easier to understand than any other statistics book I’ve had to read. I bought this edition as a physical copy and a Kindle copy of the newest editions, and they are comparable, so if you’re buying this for a class and have a friend who can give you photos of the assigned problems, go with the older edition.

I started browsing the book, as is my habit whenever I buy a new book, with the idea of doing an

in-depth reading later. But, the subject matter is so vividly covered, I could not. Here is a book I could not keep back until I completed the first 4 chapters in my first reading itself.It all started with the modern definition of quality as stated in the book "Quality is inversely proportional to variability". This definition, later led me to explore more into six sigma concepts to reduce variation before getting to ISO registration by any company. Nothing can be truer than the fact or statement in the book on ISO registration that "many quality engineering authorities feel that ISO registration is largely a waste of effort". I am one among them.This kind of striking information, style of presentation, and the font type are so good that they tempt you to explore more into the book.I enjoyed the 2-page info on legal aspects of quality, notes on Average Run Length (ARL) and was amazed by the fact that even an in-control process will go out-of-control automatically after 370 samples /observations due to the fact that 3sigma control limitscomprise only 99.73% good items.Another area I liked most is the Hypothesis testing of assumptions or conditions in quality improvement situation.Not many books explain so well the Confidence Intervals (CI) and Hypothesis testing.When I read further into this Montgomery’s work on "Introduction to Statistical Quality Control", I was doubly happy to have at last a solid book on SQC.It so happened that when I started underlining some important points (that is the respect I give to good books), I had to underline almost all of the pages in his book (Not overdoing).I am sure, so will you do.I plan to add more interesting areas, in stages, from this book that I liked best as I re-read and as an honor to such a great Author.

perfect for any industrial engineer or engineer that deals with quality. tons of information in this bad boy, one of the best statistics books ive ever had! good for class and to learn but one of the best for referencing and proving your boss wrong! great buy!

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