

**Statistical Methods for Quality: With Applications to Engineering & Management :
by Irwin Miller and Marylees Miller, Prentice Hall, 1995, pp368 ;\$NA**

This is one of the few books that successfully and seamlessly explores the statistical methods and its application in the quality and quality improvement. This book is for the novice user of statistics and for those readers who like to understand modern practice of quality methods which includes statistical methods as an important ingredient.

The terms statistics and quality are briefly introduced in the Chapter 1. The modern concept of quality and practices are further examined in the Chapter 2. For those readers who are not familiar with the modern quality movement and its leaders in the field, this chapter provides a short and comprehensive review. Total Quality Management get a terse and nice treatment here. The rest of the book arranged in a traditional statistical topic order. It includes probability distributions, sampling , statistical inferences, statistical process control, regression, design of experiments and reliability. At the end of each chapter, there is a section titled as “Application to Quality”. In this section it explores the application of the methods just learned in the chapter to the quality improvement.

A few typo can be found in the book, one is in section 5.2, page 105 , the denominator for z should be $\sqrt{np(1-p)}$, and another one is in page 286 third line from the bottom of third paragraph, it should be “D and C” instead of “B and C”.

As an introductory text book, this book has successfully achieved its purpose of showing the readers how to apply the theory taught to them to their work.

Shin Ta Liu
Lynx Systems, San Diego

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Statistical Methods for Quality book. Read reviews from world's largest community for readers. This book has been written for an introductory course in s... Start by marking "Statistical Methods for Quality: With Applications to Engineering and Management" as Want to Read: Want to Read saving... Want to Read. Currently Reading. Read. Statistical methods of quality control of production get the increasing recognition and distribution to the industries now. Scientific methods of statistical quality control of production are used in the following branches: in mechanical engineering, in light industry, in the field of utilities. Depending on scope of application allocate three main types of control cards: - control cards of Shukhart and similar him, allowing to estimate whether there is a process in statistically operated state. For the analysis and management of processes which indicators of quality are continuous sizes (length, the weight, concentration, temperature, etc.) usually use pair control cards, for example, the card for selective average value and the card of scope: X-card and R-card. Application of interest computations to engineering decision making. Analysis of engineering alternatives based on use of interest computations, valuations, depreciation, and cost estimates. Offered: ASp. Statistical tolerance design. Quality management and recent developments. Prerequisite: IND E 315 Offered: W. View course details in MyPlan: IND E 321. IND E 337 Introduction to Manufacturing Systems (4) Description of manufacturing systems. Also includes vendor sourcing and control tools, methods for establishing specifications and tolerances, quality function deployment, and other quality control techniques. View course details in MyPlan: IND E 521. IND E 524 Robust Design for Process Improvement (3) Introduction to robust design for process improvement.

Statistical quality control (SQC) is the application of statistical methods for the purpose of determining if a given component of production (input) is within acceptable statistical limits and if there is some result of production (output) that may be shown to be statistically acceptable to required specifications [688]. The wise quality control engineer does not wait for a process to go out of control. If he or she senses a trend (nonrandom or systematic variation) developing, statistical techniques are applied to test for trends, or runs, as they are called. Applying forecasting and the FMBE philosophy to aircraft automation requires only a slight stretch of the imagination. Learn how to use quality statistics to develop new methods for quality control & improvement. Visit ASQ.org for more information on statistical techniques. Statistical methods in quality improvement are defined as the use of collected data and quality standards to find new ways to improve products and services. They are a formalized body of techniques characteristically involving attempts to infer the properties of a large collection of data. The use of statistical methods in quality improvement takes many forms, including