AN INTRODUCTION TO DESIGN of EXPERIMENTS

A SIMPLIFIED APPROACH

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LARRY B. BARRENTINE

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A unique feature of the book is its step-by-step method that guides the reader through the development of experimental programs as well as identifying problems that one should be on the lookout for. Larry Barrentine has provided a useful, easy-to-follow introduction to statistical design of experiments.

— Ronald D. Snee
Management Consultant, Sleepy Hollow, NY

Design of Experiments (DOE) is the set of process improvement tools for studying more than one factor in a single experiment. Applying DOE to a process, therefore, can create tremendous cost and time savings as it tests several factors at once. Traditionally DOE has been performed by statisticians and those with a high degree of mathematical know-how. Now, however, anyone with basic mathematical skills can add this tool to his process improvement endeavors — in either a manufacturing or service setting.

By minimizing DOE's complicated math in favor of a logic approach, author Larry Barrentine has created an introductory book that simplifies the basic principles of DOE. Through his easy-to-read style and step-by-step organization, the author demonstrates that nearly anyone can adapt DOE to improve his processes.

Case studies and exercises guide you through the book and help evaluate your understanding before moving ahead to the next section. Practical examples illustrate the benefits of DOE and help you to apply what you've learned. A glossary of common DOE terms is included, making this one of the most thorough introductions to the basic tools of DOE.

ABOUT THE AUTHOR

Currently an independent consultant, Larry B. Barrentine has thirty-five years of experience in applying and managing statistical methods and process improvement at several companies. He is also the author of the book, *Concepts for R & R Studies* (ASQ Quality Press, 1991). Barrentine has taught at several universities and colleges in the United States and received a BS in mathematics from Delta State University. He also holds an MS in systems management from Florida Institute of Technology and an MS in statistics from Purdue University.

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