1.	Record Nr.	UNINA9910810060103321
	Autore	Gupta Bhisham C. <1942->
	Titolo	Statistical quality control using Minitab, R, JMP, and Python / / Bhisham C. Gupta
	Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, Inc., , [2021] 2021
	ISBN	1-119-67172-8 1-119-67171-X 1-119-67170-1
	Descrizione fisica	1 online resource (393 pages)
	Disciplina	658.5620218
	Soggetti	Quality control - Statistical methods Six sigma (Quality control standard)
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references and index.
	Sommario/riassunto	This book introduces Statistical Quality Control and elements of Six Sigma Methodology, both of which have widespread application. Chapter 1 of this book begins with a brief discussion of the different types of data encountered in various fields of statistical applications. Some terminology is also defined. Then, the authors introduce certain graphical and numerical tools needed to do some preliminary analysis of these data. In Chapter 2 the basic concept of statistical quality control (SQC) is discussed. The basic concept of Six Sigma Methodology is also introduced. In Chapter 3, the author briefly covers different types of sampling methods, which are encountered whenever we use sampling schemes to study certain populations. Chapter 4 discusses the Phase 1 Control Charts for variables. Phase 1 Control Charts for attributes is covered in Chapter 5. Next, the Phase II Control Charts to detect small shifts is discussed in Chapter 6. In Chapter 7, the author discusses the various types of Process Capability Indices (CPI). Next, in Chapter 8, the book covers certain aspects of Measurement System Analysis (MSA). The book continues with a discussion of various aspects of PRE-control in Chapter 9, which is an important tool of SQC.

Chapter 10 covers various kinds of acceptance sampling schemes which are still used at certain places in the world. Finally, Chapter 11 discusses the latest version 19 of MINITAB and R. Using these software packages, the author covers various SQC techniques. After going through the material presented in this chapter, the reader will be able to analyze, using R and/or MINITAB, all the SQC techniques discussed in this book and implement them in various sectors whenever and wherever high-quality products are desired. Statistical quality control refers to the use of statistical methods in the monitoring and maintaining of the quality of products and services. One method, referred to as acceptance sampling, can be used when a decision must be made to accept or reject a group of parts or items based on the quality found in a sample. A second method, referred to as statistical process control, uses graphical displays known as control charts to determine whether a process should be continued or should be adjusted to achieve the desired quality.