

1. Record Nr.	UNINA9910460922603321
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Titolo	Fundamentals of statistical experimental design and analysis // Robert G. Easterling, Cedar Crest, New Mexico, USA
Pubbl/distr/stampa	Chichester, West Sussex : , : John Wiley and Sons, Incorporated, , 2015
ISBN	1-118-95464-5 1-118-95465-3
Edizione	[1st edition]
Descrizione fisica	1 online resource (530 p.)
Disciplina	519.5/7
Soggetti	Mathematical statistics - Study and teaching Mathematical statistics Experimental design Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Table of Contents; Title Page; Preface; References; Statistical Software; Sources for Student Exercises (in addition to the above references); Acknowledgments; Credits; 1 Introduction; Motivation: Why Experiment?; Steps in an Experimental Program; Subject-Matter Passion; Case Study; Overview of Text; Assignment; References; 2 Fundamentals of Experimental Design; Introduction; Experimental Structure; Principles of Experimental Design; Assignment; References; 3 Fundamentals of Statistical Data Analysis; Introduction; Boys' Shoes Experiment; Tomato Fertilizer Experiment A New Tomato Experiment Comparing Standard Deviations; Discussion; Appendix 3.A The Binomial Distribution; Appendix 3.B Sampling from a Normal Distribution; Appendix 3.C Statistical Underpinnings; Assignment; References; 4 Completely Randomized Design; Introduction; Design Issues; CRD: Single Qualitative Factor; Analysis of Variance; Testing the Assumptions of Equal Variances and Normality; Confidence Intervals; Inference; Statistical Prediction Interval; Example: Tomato Fertilizer Experiment Revisited; Sizing a Completely Randomized Experiment; CRD: Single Quantitative Factor; Design Issues Enhanced Case Study: Power Window Gear Teeth Assignment;

References; 5 Completely Randomized Design with Multiple Treatment Factors; Introduction; Design Issues; Response Surface Designs; Special Case: Two-Level Factorial Experiments; Fractional Two-Level Factorials; Extensions; Assignment; References; 6 Randomized Complete Block Design; Introduction; Design Issues; RBD with Single Replication; Sizing a Randomized Block Experiment; True Replication; Extensions of the RBD; Discussion; Balanced Incomplete Block Designs; Summary; Assignment; References; 7 Other Experimental Designs; Introduction Latin Square Design Split-Unit Designs; Repeated Measures Designs; Robust Designs; Optimal Designs; Assignment; References; Index; End User License Agreement

Sommario/riassunto

Professionals in all areas - business; government; the physical, life, and social sciences; engineering; medicine, etc. - benefit from using statistical experimental design to better understand their worlds and then use that understanding to improve the products, processes, and programs they are responsible for. This book aims to provide the practitioners of tomorrow with a memorable, easy to read, engaging guide to statistics and experimental design. This book uses examples, drawn from a variety of established texts, and embeds them in a business or scientific context, seasoned with a dash
