

Einstein FOR DUMMIES®

by Carlos I. Calle, PhD



WILEY

Wiley Publishing, Inc.

Contents at a Glance

Introduction 1

Part I: A Genius Awakens 5

Chapter 1: Who Was Einstein?	7
Chapter 2: Portrait of the Scientist as a Young Man	17
Chapter 3: 1905: Einstein's Miracle Year	37

Part II: On the Shoulders of Giants: What Einstein Learned in School 47

Chapter 4: A Clockwork Universe	49
Chapter 5: The Arrow of Time	69
Chapter 6: Einstein's Most Fascinating Subject	81
Chapter 7: And There Was Light	97

Part III: The Special Theory of Relativity 111

Chapter 8: Relativity Before Einstein	113
Chapter 9: Riding on a Beam of Light	123
Chapter 10: Clocks, Trains, and Automobiles: Exploring Space and Time	135
Chapter 11: The Equation	147

Part IV: The General Theory of Relativity 161

Chapter 12: Einstein's Second Theory of Relativity	163
Chapter 13: "Black Holes Ain't So Black"	187
Chapter 14: Was Einstein Right about Relativity?	211

Part V: The Quantum and the Universe 229

Chapter 15: Atoms Before Einstein	231
Chapter 16: Quantum Leap: God Plays Dice	247
Chapter 17: Einstein and the Bomb	269
Chapter 18: Einstein's Greatest Blunder	289
Chapter 19: Not a Blunder After All	303

<i>Part VI: The Part of Tens</i>	319
Chapter 20: Ten Insights into Einstein's Beliefs on Religion and Philosophy	321
Chapter 21: Ten Women Who Influenced Einstein	329
<i>Appendix A: Glossary</i>	339
<i>Appendix B: Einstein Timeline</i>	343
<i>Index</i>	349