Many regard Albert Einstein as the greatest physicist since Newton. What exactly did he do that is so impressive in physics? The book provides an introduction to his physics at a level accessible to an undergraduate physics student. All equations are worked out in detail from the beginning. Einstein's doctoral thesis and his Brownian motion paper were decisive contributions to our understanding of matter as composed of molecules and atoms. Einstein's 1905 paper on the photoelectric effect and the quantum of light, Einstein's geometric theory of gravity and general relativity, Einstein's theory of the atomic nucleus and nuclear fission, Einstein's special theory of relativity, and finally the quantum statistics and Bose-Einstein condensation. Einstein's general theory of relativity derived wave equations for the gravitational field and strong gravitational fields. It laid the ground work for the study of black holes and cosmology.

Cheng's book takes a look at the full range of the famous physicist's work and sets out to explain Einstein's achievements from our modern understanding of the subject matter. The project succeeds. Cheng's explanations combine conceptual clarity with mathematical detail and historical sensitivity.