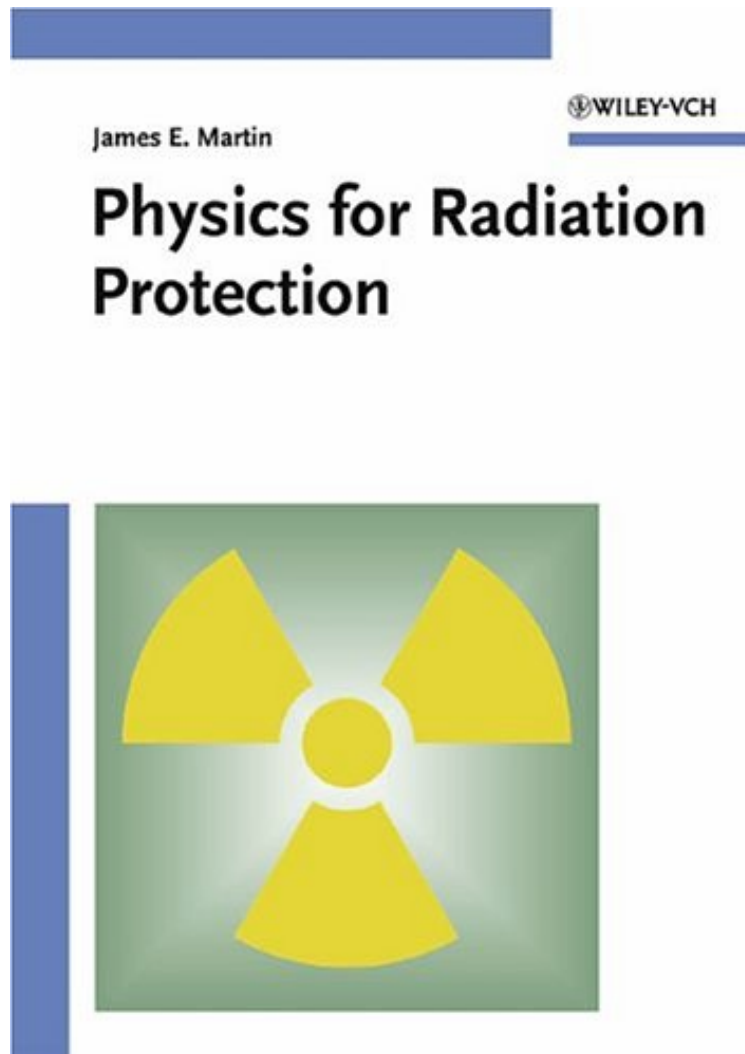


Physics for Radiation Protection

James E. Martin

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James E. Martin : Physics for Radiation Protection before purchasing it in order to gage whether or not it would be worth my time, and all praised Physics for Radiation Protection:

2 of 2 people found the following review helpful. An invaluable contributionBy Fred FennerJames Martin has produced a work that all members of the health physics community will find invaluable. Students, instructors and practicing radiation protection professionals will find this book useful. It covers, in a clear and concise manner, all of the important radiation physics topics that comprise the foundation of radiation protection. Whether used as a teaching tool or as a reference, this book fills a void in the literature that has long existed. I wish this work were available when I was receiving my radiation protection training.As the RSO of a major ophthalmic pharmaceutical research and development company, I will apply the information in this book to both radiation safety operations and to radiation

safety training for our users. My congratulations to James Martin for publishing this book. I highly recommend it to all in the radiation protection field. 4 of 8 people found the following review helpful. VALUABLE IRRITANT... By Tj V. Rooyen
Physics for Radiation Protection by James E. Martin is a valuable yet irritating book. Only the chapters about detector operation and counting statistics are truly professional. In the earlier part of the book, there is a very characteristic lack of rigour. Almost every sentence, every paragraph is badly worded and lacks rigour. This book is the product of our modern culture where people sit in front of PCs the entire day, and type manuscripts directly on PC. A well-versed theoretical physicist will cringe when reading most of this book. However, despite simplistic science, bad formulations and dispassionate grammar, the book holds significant utilitarian value -- it can really be quite useful for practicing, practical, non-academic radiation protection staff. Bypassing the regular physics courses and substituting this shortcut into physics for RP learners, resulted in this book: Terrible academic physics, but still useful for the practical science of Radiation Protection.

A practical guide to the basic physics that radiation protection professionals need A much-needed working resource for health physicists and other radiation protection professionals, this volume presents clear, thorough, up-to-date explanations of the basic physics necessary to address real-world problems in radiation protection. Designed for readers with limited as well as basic science backgrounds, Physics for Radiation Protection emphasizes applied concepts and carefully illustrates all topics through examples as well as practice problems. Physics for Radiation Protection draws substantially on current resource data available for health physics use, providing decay schemes and emission energies for approximately 100 of the most common radionuclides encountered by practitioners. Excerpts of the Chart of the Nuclides, activation cross sections, fission yields, fission-product chains, photon attenuation coefficients, and nuclear masses are also provided. Coverage includes: * The atom as an energy system * An overview of the major discoveries in radiation physics * Extensive discussion of radioactivity, including sources and materials * Nuclear interactions and processes of radiation dose * Computational methods for radiation exposure, dose, and shielding * Nuclear fission and production of activation and fission products * Specialty topics ranging from nuclear criticality and applied statistics to X rays * Extensive and current resource data cross-referenced to standard compendiums * Extensive appendices and more than 400 figures

"...a useful source of knowledge for the North American health physicist." (Radiation Protection Dosimetry, Vol. 97, No. 3, 2001)
From the Back Cover
A practical guide to the basic physics that radiation protection professionals need A much-needed working resource for health physicists and other radiation protection professionals, this volume presents clear, thorough, up-to-date explanations of the basic physics necessary to address real-world problems in radiation protection. Designed for readers with limited as well as basic science backgrounds, Physics for Radiation Protection emphasizes applied concepts and carefully illustrates all topics through examples as well as practice problems. Physics for Radiation Protection draws substantially on current resource data available for health physics use, providing decay schemes and emission energies for approximately 100 of the most common radionuclides encountered by practitioners. Excerpts of the Chart of the Nuclides, activation cross sections, fission yields, fission-product chains, photon attenuation coefficients, and nuclear masses are also provided. Coverage includes: * The atom as an energy system * An overview of the major discoveries in radiation physics * Extensive discussion of radioactivity, including sources and materials * Nuclear interactions and processes of radiation dose * Computational methods for radiation exposure, dose, and shielding * Nuclear fission and production of activation and fission products * Specialty topics ranging from nuclear criticality and applied statistics to X rays * Extensive and current resource data cross-referenced to standard compendiums * Extensive appendices and more than 400 figures
About the Author
JAMES E. MARTIN, PhD, CHP, is Associate Professor (Emeritus) at the University of Michigan where he has done research and teaching on environmental and public health aspects of radiation with an emphasis on radiation physics since 1982. He also served 25 years (1957-81) with the U.S. Public Health Service and Environmental Protection Agency, doing environmental assessments of radioactive materials including protection standards. His doctorate is in Radiological Health. Professor Martin is certified in Health Physics by the American Board of Health Physics and has published over 40 peer-reviewed papers and numerous articles and reports. Advisory Committee memberships include two National Academy of Science committees, the Science Advisory Board of the Environmental Protection Agency, and the U.S. Department of Energy.