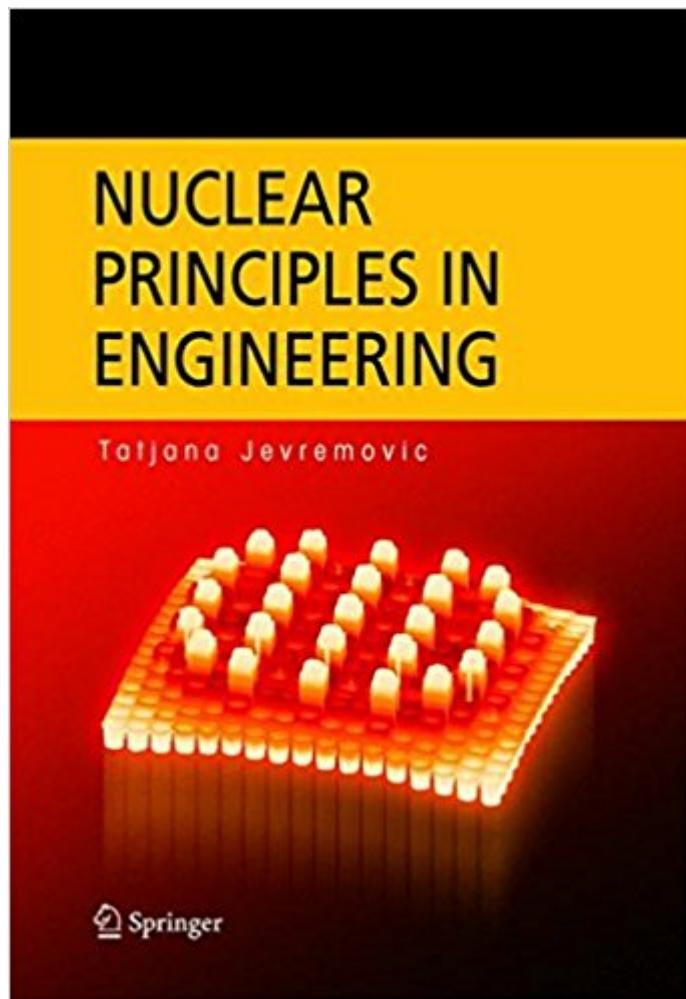


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# Nuclear Principles In Engineering



## **Synopsis**

Nuclear engineering plays an important role in various industrial, health care, and energy processes. Modern physics has generated its fundamental principles. A growing number of students and practicing engineers need updated material to access the technical language and content of nuclear principles. Nuclear Principles in Engineering is written for students, engineers, physicians and scientists who need up-to-date information in basic nuclear concepts and calculation methods using numerous examples and illustrative computer application areas. Drawing upon years of practical experience and research Tatjana Jevremovic covers nuclear principles as they apply to: - Power production propulsion - Electric generators for space applications - Diagnostics and treatment in medicine - Imaging - Homeland securityÂ

## **Book Information**

Hardcover: 444 pages

Publisher: Springer; 1 edition (July 1, 2005)

Language: English

ISBN-10: 0387232842

ISBN-13: 978-0387232843

Product Dimensions: 1.2 x 6.5 x 9.2 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: 2.3 out of 5 stars 6 customer reviews

Best Sellers Rank: #6,508,123 in Books (See Top 100 in Books) #30 inÂ Books > Textbooks > Engineering > Nuclear Engineering #1147 inÂ Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Nuclear #4416 inÂ Books > Science & Math > Physics > Nuclear Physics

## **Customer Reviews**

Nuclear engineering plays an important role in various industrial, health care, and energy processes. Modern physics has generated its fundamental principles. A growing number of students and practicing engineers need updated material to access the technical language and content of nuclear principles. Drawing upon years of practical experience and using numerous examples and illustrative computer applications, Tatjana Jevremovic covers nuclear principles as they relate to: Nuclear power Nuclear imaging Aerospace and propulsion engineering Power production propulsion Electric generators for space applications Diagnostics and treatment in medicine Homeland security Health physics Radiation treatment and imaging Radiation shielding systems

"Nuclear Principles in Engineering, Second Edition" is written for students, engineers, physicians and scientists who need up-to-date information in basic nuclear concepts and calculation methods. --This text refers to the Paperback edition.

The book has some interesting ways of presenting the topic but is not for someone with a sound background in physics (in that case you can skip more than half of the book at once). It does expend a lot on basic physics which is not bad, but dedicated to details that are not needed at all for the main subject, which is the principles for engineering in the field of nuclear reactors. Another major problem is the equations editor, very nasty, the equations look nasty with huge parenthesis where they are not needed making the reading a bit disgusting. In the nuclear engineering part there are some mistakes but it is not so bad. Another major problem is that for the more interesting examples, they are worked out by programs that are not easily available, even though some are just academic level stuff, this is a major drawback of many of these books. They should consider some of the more available codes for educational purposes. As a recommendation, try to look the book before you buy it.

Examples are quite frequently incorrect conceptually or incorrectly computed. The writing style is poor and the editor missed many typographical errors. Everything contained in this book is essentially a watered down version of Lamarsh's Introduction to Nuclear Engineering or Duderstadt's Reactor Theory. Quite disappointing. In my honest and humble opinion, this book is not worth the paper it is printed on, not to mention the ink. I did take a course from Dr. Jevremovic, the author, and it was the biggest waste of time of my entire (undergraduate and graduate) college career. To anyone looking to learn about Nuclear Engineering go anywhere but to the UoU while she is there. Not only is it a waste of time, what is taught is incorrect so you have to try twice as hard to "unlearn" what the program teaches you. Don't do it. Just my 2 cents.

I took the class from the professor that wrote this book and it poisoned me away from pursuing a nuclear minor. The book is poorly written and doesn't make much sense at all.

As an introductory Nuclear Engineering or Nuclear Physics textbook, the book fulfills only the minimal requirements. There are none of the marks of a thoroughly constructed book, such as separate sections with supplementary information. These faults were all excusable, until the list of mistakes and typos began to develop. It is inexcusable how blatantly incorrect some of the formulas

are in this text. The book needs a serious once-over for corrections.

This second version is very good. This is a good text book of Nuclear Physics for Nuclear Engineers. Of course there are other texts, but then there are also many texts about any subject. Maybe the price is a little high.

I am a graduate student in nuclear engineering, so I have read several "introductory" text books over the years. This particular book is not very well written and as previously mentioned includes a lot of physics related information, but offers little in the form of nuclear engineering itself. I would strongly recommend anyone looking at this book obtain Knoll's Radiation Detection and Measurement book for a better description of how the fundamental physics are applied in the real world, and also obtain Lamarsh's Introduction to Nuclear Engineering for a bigger picture about nuclear engineering in general (especially for power reactors). With those two references you can find almost anything you would ever want to know about nuclear engineering fundamentals and more. As for Andrew's comment about blatant errors, that is very true with this book and we had a running tally in class when students found them. I believe it was about 10-15 pages long when the semester ended. Even better, some of the definitions or explanations were verbatim from Wikipedia. So keep that in mind if you are required to use this book for a course.

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