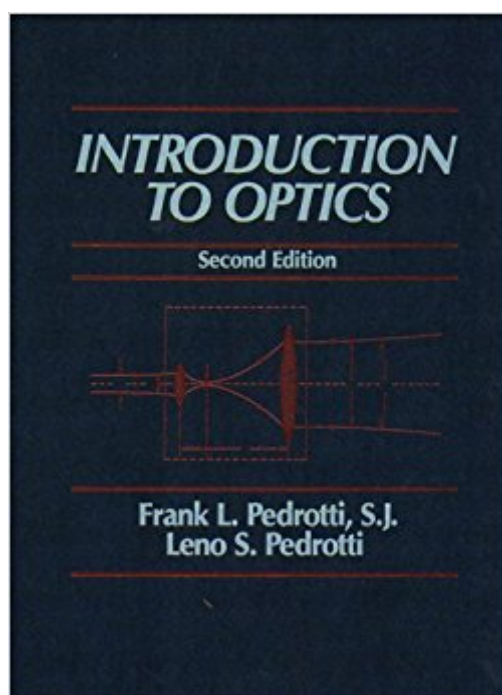


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# Introduction To Optics (2nd Edition)



## Synopsis

This is a comprehensive, applications-oriented introduction to geometrical optics, wave optics, and modern optics. Contains new chapters on laser beam characteristics and nonlinear optics; expanded coverage of fiber optics; new sections on ray tracing, thick lens, the Doppler effect, and evanescent waves; and valuable coverage of matrix treatment of polarization, Fraunhofer diffraction, Fourier optics, and more. An ideal introductory guide for the physics instructor, specifically those concentrating on optics.

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## Customer Reviews

A comprehensive, applications-oriented introduction to geometrical optics, wave optics, and modern optics.

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The authors present optics at an intermediate level - not as detailed or complete as Born and Wolf, but it is a mathematical treatment and just slightly on a lower level than Klein and Furtak or Hecht. It is not just a survey. Certain parts of it are extremely good - for example, the chapter on Theory of

Multilayer Films presents more useful data on antireflection coatings in a more concise, readable, well-illustrated format than any of the above books. It also presents common applications such as the Snellen eye chart used to measure visual acuity at your ophthalmologist in an "Optics of the Eye" chapter. Overall, a pretty decent first level optics book.

help me a lot. fine. i love it so much, love it . perfect weight , perfect size ! cuts everything so neat ! I really recommend it !

I have given recitations for a course when I was a TA. For my own reference it was very good concerning many matters, when one really needs the problems like reducing aberrations or like multilayer thin film optics or may be even non linear optics, this book is a very honest written book. But I do not know if it is a good idea to talk about aberrations for the people who do not have much idea about Gaussssian geometrical optics for instance. Its level is not a graduate level, but, you know, for young people, they do not want to hear about the problems that they may face in life, untill they really do. I still have this book on my shelf, even after shifting to different topics. To me it is a compact and a real life book. Does not talk about myths, tells you the truth of life in optics. But of course Hecht s book is better may be as an introduction, gives a better overall map of the field. If you will have several optics book in your life this is one of them. But only if you work out the problems and think about the reason why they were asked. Every problem in this book is about a real life case in the optoelectronics laboratory and not about a fantasy.

I used this book for an undergraduate optics class and felt that it was very clear and readable. It is good for a survey optics course, but it lacks some more technical information useful in the laboratory. For classwork and theory, it laid a good foundation. For lab work, I often found myself having to look to other books such as Hecht or Jenkins & White. It has since served as a good reference book for many basic concepts. The concepts and mathematical procedures can be found easily and quickly without wading through the technical parts.

We used this book for a one-semester undergraduate optics course. Readers should be aware of the fact that this textbook focuses more on the applications, not so much with theory. You only need the first-year introductory physics to keep up with the most stuff in the book, and the problem sets are very manageable with the answers to most problems provided at the end of the book. As a physics student, this made the entire course awfully boring and meaningless. I think many colleges

teach optics after undergrad E&M, and if you are in one of those colleges, I strongly recommend NOT using this book as the textbook. Ideally, you would want take Maxwell equations as a starting point and going into diffraction theory, boundary value problems, etc., especially if you have already finished sophomore/junior level E&M. This book treats these only toward the end of the book. Who wants to bother with a bunch of geometrical optics, only to solve different kinds of problems without being exposed to new principles? I think an optics course in physics should be taught in a fashion that the phenomena in relation to Maxwell equations are illuminated. On a good side, I do think the book does a pretty good job of teaching the materials that it covers.

I don't see how anyone could approve of this book. I'm taking an undergraduate class in optics and the professor chose this book. It is the worst textbook I have ever had. And everyone else in my class agrees with me. If I don't understand or miss a lecture, there is no way I'm going to get up to speed by reading this book.

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