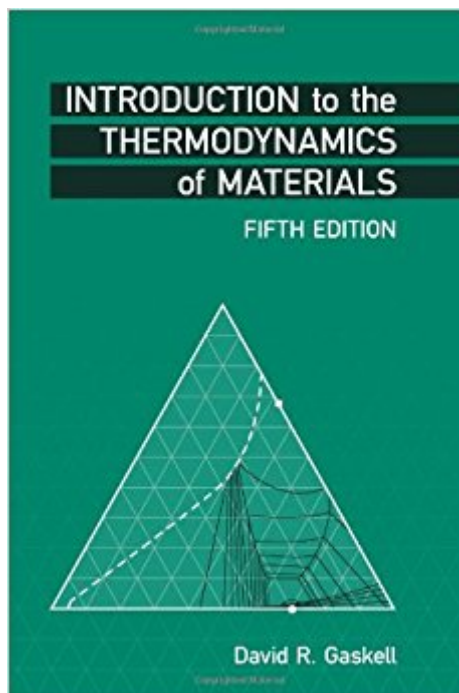




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# Introduction To The Thermodynamics Of Materials, Fifth Edition



## Synopsis

This classic textbook is the definitive introduction to the thermodynamic behavior of materials systems. Written as a basic text for advanced undergraduates and first year graduate students in metallurgy, metallurgical engineering, ceramics, or materials science, it presents the underlying thermodynamic principles of materials and their plethora of applications. The book is also of proven interest to working professionals in need of a reference or refresher course.

## Book Information

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## Customer Reviews

"Acquisition of the text is highly recommended for materials science students at advanced undergraduate and postgraduate level. Would I have bought this book if it were available while I was pursuing my undergraduate degree in materials science? Yes; in fact, I extensively used an earlier edition of this text." [Ash Ahmed](#), Leeds Metropolitan University, in *Times Higher Education*, 2008

"This classic textbook is the definitive introduction to the thermodynamic behavior of material systems." [In Journal of Heat Treatment and Materials](#), September 2008, Vol. 18, No. 9

"The text is excellently written and is of equal value both to first-time students in thermodynamics of materials as well as to metallurgical and materials engineers seeking to refresh their knowledge . . . This text book has evolved over the past 30 years and has gained a state that permits to recommend it without any restrictions to both students and professionals. I am convinced that it will continue to be one of the most significant titles in this field for many years to come."

[Ewald A. Werner](#), Professor of Materials Science and Mechanics of Materials, Co-Editor

Materials Science and Engineering, Technische Universität, 2008 "The long life of this textbook is as good an evaluation of its quality as any book reviewer's praise. ...It will remain as a classic for times to come..." MRS Bulletin

David R. Gaskell received a B.Sc. in Metallurgy and Technical Chemistry from the University of Glasgow and a Ph.D. from McMaster University. He joined the faculty of the University of Pennsylvania in 1967 and later moved to Purdue University, where he is currently a Professor of Materials Engineering. --This text refers to an out of print or unavailable edition of this title.

This book is just plain awful. How can a book that's been through 5 editions and 30+ years be this bad? Typographical errors are rampant, in the text, the equations, and even a few figures. The notation is inconsistent both across and within chapters. This could all be dismissed as a superficial complaint, but seriously...five editions? There's no excuse. Despite the fact that you have to read slowly and carefully to make sense of anything, I found this book practically useless as a tool for learning thermodynamics. Gaskell goes on and on and on and on and on about mundane details (the book could easily be 200 pages lighter), while glossing over the important points. Some explanations are muddy at best, even after reading the section two or three times. The very few worked example problems within the chapters are easy enough to follow, but are useless in providing guidance for solving the exercises at the end of each chapter. Some of said exercises are horribly worded and, frankly, ambiguous as to what exactly to do for the problem. Skip this book if you can help it.

I stopped reading the book because it was pretty boring. However, this is a book on thermodynamics, so it is expected to be pretty dry material (i.e. not too fascinating). The solutions in the back of the book are wrong half of the time. If you are in a bind this book will work. I would recommend looking around for other books. The guy that wrote this is from Purdue engineering (last time I checked), which is a pretty good engineering school (that adds some solid credibility to the author's knowledge). The disc that comes with it is a joke (I don't know why they even included it). All around, I would look for another thermo book on materials.

With how long this book has been in print and the number of times it's been revised, you'd think someone would catch all the mistakes, especially in the problems and answers at the end of each chapter. I've actually heard that the later additions have even more typos/errors. I don't know how

much time I spent trying to figure out if I was making mistakes or if it was yet another typo. There is some good info to be obtained from this book IF you have a competent professor (I'll assume students are reading this) who takes the time to preview everything from this book before he/she assigns reading/problems from it.

Book is short on superfluous images, though a few mathematical things may not make sense, expect that's normal for thermo. Is small and thick- backpacks matter

At some points this book is very lucid and fluidly walks the reader through very complicated topics. However! Every single chapter is riddled with typos in MAJOR places. These are typos in the formulas and equations so it really interferes with the student's ability to progress through the material. I've learned to keep wikipedia open so when I complete a problem, end up with the wrong answer, I can check to make sure the book is right. This is inexcusable for a FIFTH edition of a textbook. Furthermore, there are very few worked out examples. The text leaves the student with a loose understanding of the theory and a set of OFTEN WRONG equations to tackle assigned problem sets.

There are several significant problems with this book, in addition to the errors that others cite: 1. Overly long explanations that lead nowhere - Several times I've found that even after reading the chapter, I've had to look elsewhere for important equations, perhaps the author expects that any useful equations we can just derive ourselves based on what he gives. 2. No solutions for the problems - It gives the final answer (usually), but no explanation of how to get there. 3. Poor examples - The examples often seem completely unrelated to the content discussed elsewhere in the chapter and then often unrelated to the problems. Additionally, the examples aren't integrated into the material, they're just put at the end, so you have to read the whole chapter before you can find out what parts are useful and what parts are just background information. I rated it a 3 as I don't actually have any other thermo textbooks to compare it to, but this book doesn't set the bar very high.

There are mistakes in the book with problems that have nonsense parts in their solutions. The print in some pages is really bad that is not easily readable. When I pay a high price, I expect a good quality book in every aspect.

The publisher would do well not to publish books off of low-resolution PDF post files. Half of this book is in fuzzy print, which is very terrible when you have formulas with subscripts and superscripts that you can't distinguish between because they're nearly identical blobs in the print.

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